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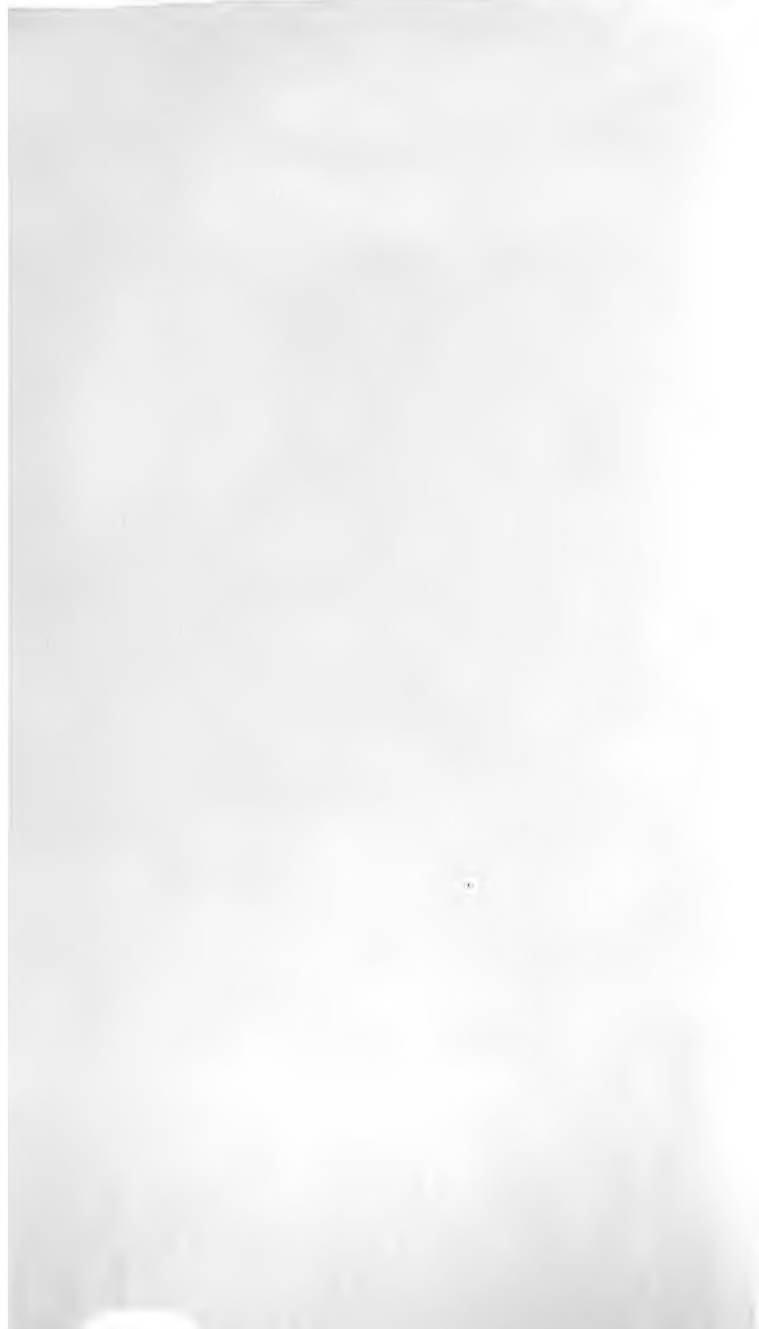
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CLASS OF 1828









JAPANESE TEA MAIDEN AT MIANOSHITA.



CIRCULAR NOTES.

FOR THE
USE OF THE
AMERICAN
MUSEUM OF NATURAL HISTORY.

FOR THE USE OF THE
AMERICAN MUSEUM OF NATURAL HISTORY.

1871.

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MY CIRCULAR NOTES.

EXTRACTS FROM JOURNALS, LETTERS SENT HOME,
GEOLOGICAL AND OTHER NOTES,
WRITTEN WHILE TRAVELLING
WESTWARDS


ROUND THE WORLD,

FROM JULY 6, 1874, TO JULY 6, 1875.


BY
J. F. CAMPBELL,
AUTHOR OF "FROST AND FIRE."

1 - 2

IN TWO VOLUMES. --VOL. I.


London:
MACMILLAN AND CO.
1876.



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Dedication.

**IT IS THE CUSTOM OF PAINTERS TO PRESENT A DIPLOMA
PICTURE TO THE ROYAL ACADEMY WHEN THEY RISE
TO THE DIGNITY OF R.A.**

**TO THE MEMBERS OF THE ATHENÆUM CLUB, WHO
DID ME THE HONOUR TO PLACE MY NAME ON THEIR
LIST WHILE I WAS AT THE OTHER SIDE OF THE
WORLD, I DEDICATE THIS CONTRIBUTION TO THEIR
LIBRARY.**

J. F. CAMPBELL.

NIDDRY LODGE, KENSINGTON,

July 6th, 1875.



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JAPANESE TEA MAIDEN AT MIANOSHITA.

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MY CIRCULAR NOTES.

FACTS FROM JOURNALS, LETTERS SENT HOME,
GEOLOGICAL AND OTHER NOTES,
WRITTEN WHILE TRAVELLING
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ROUND THE WORLD.

FROM JULY 6, 1874, TO JULY 6, 1875.

John BY
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MY CIRCULAR NOTES.

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£10000.0.0.
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Ten thousand Pounds Sterling,
value received,
£10000.0.0. H. Walker & Co.

LETTER OF INTRODUCTION.

July 26, 1875.

The mental matters upon the following pages were dressed in paper between this date and July 6, 1874. The writer on these papers—a briefless barrister, and public servant out of place, “took the world for his pillow,” like the lad in the story, and set out to amuse himself in that long vacation which he hopes will last for many years, and his life. He might have been wearing out arm-chairs in London, well-paid and housed for doing very little; he prefers to please himself, and ramble with some object in view. “It’s better to wear shoon than sheets,” according to the old saw; “It’s better to hear the lark sing

than the mouse squeak," as the Douglas said. Our object this time was to visit places to which the writer once thought of migrating, bag and baggage, horse, foot and dragons. He wanted to see how it felt: to judge what the past might, could, should, or would, have been like, after 1848, if it had been done; to visit old friends who went and did it then honestly and manfully, like men and Britons. In these regions this idle vagrant was asked what trade he worked at, and whether he was a "bug collector," which is contemptuous Californian for a naturalist. On the main route he was classed "globe-trotter," which name is antipodean—Yokohamese—Yankee-pigeon-Scotch, for the "Onepieceydamfoolsteamboatpassenger" of the Chinese. It means an idle, aimless, running, rich, gullible, squeezable being, wasting money; useful only to traders who fleece globe-trotters all round the world.

"Scotland is all spoiled," said a great man one day about 1848 or 1849. "I'll never go there again. It's full of dismal creatures, rushing about here and there seeking for an excitement." These are "globe-trotters." A friendly polite French steward, who knew Alexandre Dumas and had seen him writing on board of a steamer in the Black Sea, or somewhere else, warned this writer, whom he took for a writer of fiction, to lock up his papers. "*Ces gens-là sont capables de les imprimer; ils sont très-voleurs les voyageurs,*" so he said.

The papers continued to kick about the cabin. Nobody read them; the stewards trampled on them when they swept up the dust in the morning. Vagrancy does make

men acquainted with rough night quarters; but there's honour amongst thieves, and fun amongst jolly beggars.

"Les gueux, les gueux, sont des gens heureux! Vivent les gueux!" Paper writings are the last things that vagrants pick out of the dust-hole, unless they are stamped; then they are apt to be annexed. The "circular letters" of Coutts and Co. were carefully hidden in separate places according to orders. They got home safe, so did my worthless "circular notes" and paper writings, which were stamped, only by Postmen, Stewards, Boots and Co.

The letters were posted when a post could be found, with the design of making friends at home see and hear with the vagrant writer. Many kind friends saw and heard, and said that they were amused. Some of the letters are wandering still. After a long parting the writer met his rough family of rude, ugly, bodiless beings neatly copied, well-dressed, like other rough fellow-travellers, adorned in new garments by town tailors. He was reminded by them of pleasant places, and people, sights and sounds. But after some weeks it became a bore to answer the question, "Where have you been since I saw you?" The letter writer took to pointing downwards and answering gravely "THERE." That seemed to be taken as the revival of the tenant of a comfortable coffin by some, who glared with scared eyes, and presently said, "We heard that you had been burned in the *Japan*." Some of the letters were in "the *Japan*," but their writer was on the Japanese hills amongst the snow. Matter-of-fact friends manifestly thought of the cellar, and suspected wine. Faces can be read like books. The case suggested printing in self-defence, for all

who questioned could not read one paper writing, and we not be content with one word. Friends openly asked for book." A fellow-countryman offered to cash my circular notes, and he got the paper stamped by Boots and Co. float on his stock exchange. The author of the bodiless beings read the letters in which they were lodged, and rather amused by their prattle. They had travelled in 1871 with oil-well shares, Emma Mine, Comstock Ledge, bill exchange, and tea godown rich mercantile papers, till they had taken the infection of trade, like their elders and betters. Small blame to them if they earn money honestly, and spend their gains with their parent. He forgave their good correction of them. He cut names and passages and letters out of a manuscript copied by a very neat-handed scribe, for his reading only. The family of impersonal persons, with scarcely a change, now stand in order of age to be reviewed as they were delivered by the postman. That is the true story of the letters. They were written to amuse the writer and his friends. A journal was kept also. From it material might have been extended. A great many sketches as rough as the letters were stuck into the journal, with photographs selected to illustrate various subjects. Of these pictures the skilled hands who make books have had as many as they pleased to put into their work, on this condition, that no artist, however skilled, is to improve or alter that which in fact, is the best copy from nature which a vagrant amateur artist was able to make with his materials, in the time which he had to spare at the place which he wished to represent.

That is the true story of this book so far. It is a corporation aggregate of impersonal persons and bodiless beings.

lay, not ecclesiastical, or eleemosynary; not created for the advancement or regulation of manufactures and commerce, but for special purposes and divers ends, like a club. It has a name and rights, for which see "Commentaries on the Laws of England," by Sir William Blackstone, Knight.

The geological paper was foaled on the way by one of the hobbies or neddies on which this vagrant rides when he is tired of driving the horse in a mill that grinds daily bread. It was got by Induction out of Observation. The dam and sire are old stagers: this dark horse may turn out a flyer, a screw, or a slug. Other hobbies helped on the trail. One skittish brute was that long-tailed fiery dragon which haunts the world and fairyland. He was hatched by Germans, Mr. Fergusson, and other comparative mythologists out of a serpent's egg formed by Shesha Naga, Yormundgandr, and a knot of other snakes long ago. Ethnology drew the Jinrikisha and carried the Cago in Japan. Many-voiced Philology cried "with voice inside him mouth, all the same gong. Topside golah!" Many cheery young human voices also cried "Excelsior" when they passed towards hill-tops; and helped an older boy all they knew. Bright old climbing days for climbing sake were gone. "Wait till you come to forty year," you cheery Yankee prairie birds of Pike's Peak; and you strong Scotch and Irish climbers of Ceylon. If you have to sit in chairs and grind your brains to make your bread long enough, you too will ride when you can find a horse to carry you. Climber, hunter, and fisher have found that sedentary work and years weigh heavier than flesh and bones on "the hill." This sportsman at his bloodiest never awoke daily

exclaiming, "What shall I kill?" This time he made acquaintance with many curious creatures, wild and tame, tailed and untailed, brutal and human: some tending towards angels of the Zenith and Nadir. But he did not shoot anything or anybody, and nobody hurt him. He carried nothing more deadly than pens and pencils; and no shield but a civil tongue, a big stick, and a steady eye. Natural history can be studied from life in the wilds without turning "bug collector." A houseless vagrant does not want a museum and scalps. On this trail pleasant human society abounds. Amusement and "Ologies" were motive powers abroad, they were comrades and companions where white men were not, and are so where books and men are crowded together at home. In short, long art helped a short-lived son of Earth to get round his old mother.

Letters home and lessons learned in a year and a day are the mental matters sent to be printed on the pages of a book. That readers may be amused by that which amused the writer is the hope of a Celtic Nomad who has worked hard for his holiday. He is known in his own land still as

IAIN ILEACH.

MORNING CIGAR AFTER BREAKFAST.

No. I.

ADELPHI HOTEL, LIVERPOOL,
July 7th, 1874.

MY DEAR MOTHER,

Keep my letters, and they will make a series for a journal, and save me trouble.

My first adventure was within half an hour of starting. I was quietly ruminating when a severe bump roused me; a lurch to the right followed, then one to the left, and then a bump right down in the middle. A Hansom had taken off my hind wheels, and there I sat, in a sledge, gliding over the stones of London. I opened the door, jumped out with that agility which remains to me, and stopped the horse. The driver had quite forgot to do that in his anxiety to catch the Hansom's number. A swarm of cabs, and of butcher boys and others, clustered round us, and all stared at me as if I had lost my hind wheels. I bundled my goods into another cab, and in five minutes I was off again, leaving the wreck.

At the station I met a very good fellow, and we had a pleasant drive to Crewe. There he went to Manchester, and I to sleep. In the carriage was an old German who resides chiefly at Wiesbaden, and is visited by the Emperor.

His son had just been round the world. I asked how much it had cost him. He opened his hands and his eyes and spread his arms, and shrugged his shoulders, and said "About ten thousand pounds."

Here I slept, and now I have breakfasted and inspected the other travellers. One last night was very drunk. He ate cream cheese with two knives. With his right knife he cut a slice, with his left he scraped it off the right and then with his tongue he wiped the cheese off the knife into his mouth. After this he thrust a lettuce leaf endwise after the cheese, and bit it off, and then he began again with the knife exercise for half an hour at least.

I hope he is not my chum. I have spotted a man in a blue shirt, with a clean face. I hope he is going my way.

J. F. C.

NO. II.

"BATAVIA," OFF IRELAND,
Wednesday, July 8th, 1874.

MY DEAR MOTHER,

I have got 57 to 60, a roomy cabin, with leave to keep my port open. All my bags are hung about on pegs, all my cloaks are in one berth, and I roll into the other and am at rest. The wind is S.E., the sea smooth, thermometer 60°, barometer 30·550°, clouds quiet, and all's well. This will be landed at Queenstown, where we are to stop four hours for the mails as usual.

Going round the world all alone at this rate will be easy, quiet work, and my journal thin. For lack of some thing to draw, I have been drawing the gulls, who have followed ever since daylight, waiting for the cook's contributions, on which they pounce, yelling, to rise again, and

follow on. That I have fixed and fastened into my big book, and there I mean to fix this letter, when you return it to me. I cannot be bothered writing rubbish for myself to carry and show to fellow-passengers.

J. F C.

No. IV.

"BATAVIA," AT SEA,
Thursday, July 9th, 1874.

MY DEAR MOTHER,

The last thing that left the ship yesterday was a bag with No. 3 in it. (*Now demolished.*)

The excitement was to see the mails come on board. The *Jackal* came off, and got alongside, and then both ships together, with a gangway between, steamed out, plunging. Sailors ran like a stream of ants loaded and light, out and in, over the gangway, and bags full of thoughts on paper come tumbling in heaps on board. Then at the buoy we separated. Then a frantic man slipped down a rope into a little boat, somebody knocked him down with his own valise; somebody else put in the post-bag, and off we went after the setting sun seawards. We are thirty cabin passengers and 520 to 30 emigrants; 100 of crew and other people; and, so far as I can see, I am the only passenger on board that is doing anything but feed the fishes. It is fine and breezy from the north, with a considerable pitch and heave. There is absolutely nothing to do, and I am doing it. From the smell of whisky I reckon that the passengers are having a drain in their berths.

Friday, 10.—Swell and fog. A lot of French-speaking people from Verviers and Liège, singing the Marseillaise, and other songs, very well in parts. I discoursed them and

found that one at least was in Paris with me during the Commune. I gave him a cigar. He is bound for California, and hopes that we may meet again. I hope if so, that it may be daylight.

In the evening we were dismally howling in a thick cloud, rolling and pitching.

Saturday, 11.—Rolling and pitching. Spent my time in reading and inventing contrivances.

A little girl, aged 10, propounds the riddle, "What ship has two mates and no captain?" *Answer:* Courtship! "That's a crushing little girl," quoth the fourth officer.

Sunday, 12.—Blue sea and white horses, confused cross sea; ship wriggling in a strange fashion. Service at 10.30 read by Captain Moulard. He is a very good fellow. All the evening a lot of Bostonians and a Yankee Lancashire parson sang hymns. They did it rather well.

Monday, 13.—North-west. Clear sky. The first clear day since we started. The Irish lot, having found a flute and a player, took to dancing jigs, old and young. I found the Norseman. He comes from Telemarken, and speaks no English.

He looks a Norseman all over, and I mean to get at his story. Now with regard to weather.

The Captain says the Atlantic has been very foggy all this year. He, like me, holds our Government Meteorological Department very cheap. He holds that weather prognostics might be made by telegraphs from Boston and Newfoundland; together with the logs of steamers running westwards, telegraphed from Queenstown to headquarters.

In America they telegraph western weather to the east coast, and find that tracts of weather move northwards and eastwards. That is reasonable and probable. It is true experimentally. Our system is to tell people what the weather was: which does not help to prepare them for the morrow. All that I have to say about the world's weather I put into my log.

Tuesday, 14.—Fine, bright, small waves; north-west breeze; getting on fast. Last night I watched the comet till near midnight. The tail was more than twenty degrees long, and the head was very bright. It was just abreast of my port; so I rested my glass on it, and watched and wondered. It was very like a falling rocket, some ten degrees above the dark horizon, plunging into the sea. I made a rude sketch in the morning. Jigs are going on to a flute played by a native; cards in the saloon.

Odours of drinks and lemonade pervading the atmosphere. "You are the first lord I ever met," said a Yankee boy to me. "But I ain't a lord," said I.

Wednesday, 15.—After dinner last night we saw a cloud ahead on the sea, and presently dived into it, and howled dismally with the fog-horn for the rest of the night. The air was fifty-one degrees. We had got to a streak of the arctic current. This morning we had got to a lane of the Gulf Stream. The wind south-west and the glass sixty degrees.

The steerage people are all alive; little Belgian girls and babies pay me the compliment of fraternizing with me. The Irish lot have so far recovered as to be love-making in the most demonstrative fashion in all sorts of strange

places. In the intervals of courtship they dance jigs. is regular yachting.

I have good food, and 520 people to amuse me Irish antics, and French and German, and Norse and Danish and Swedish on whom to practise tongues. So far, well. good time be it spoken."

Thursday, 16.—Last night the stars shone over and the comet glowed like a pillar of light through the sky. This morning the sun shines, and the sea is covered in a thin haze. Strong west wind; thermometer 64°.

The Captain produced a pocket revolver and a dagger which were taken from an irate steerage passenger. They took to pelting each other with potatoes; one got angry and threatened to use his arms, so he was disarmed. The revolver was loaded.

Friday, 17.—Fog and fog-horn, thermometer 64°, wind west. We are here about the latitudes of Tiflis, Nanking, Madrid, Lisbon, and other hot countries. But in consequence of ocean circulation the climate at sea is quite different.

The cold stream which comes down by Greenland, Labrador, Newfoundland, and over the banks, crosses the Gulf of St. Lawrence, and coasts Nova Scotia and the Strait of Belle Isle hugging the shore westwards. Outside, the warm stream crosses the cold at the banks of Newfoundland.

Where the damp air of the warm stream comes to the water, there mists condense, and we have been in clouds of this kind, and we are in a wet cloud now. Consequently the Captain is fenced in with ropes, and inaccessible; the fog-horn is howling, and we have just stopped to sound


order to avoid the fate of the *Atlantic*, which ran right ashore in a similar mist. Passengers are beginning to pack up, and sailors to bring up moorings and coil them on deck. We live in hopes of landing to-morrow, Saturday, the 18th. After a run of 2,960 miles from Liverpool to Boston, add 220 to Liverpool, and I shall have made 3,180 since we parted.

So far I have been neither sick nor sorry for myself. I have read an amusing book about La Salle, who discovered the Mississippi; a great bit of Kinglake's *Crimea*; and of Tom Hughes on Alfred the Great. I have had all my comforts and dodges about me, and a steward to act valet and bring my morning tub. My wine bill will be covered by two bottles of sherry in ten days, one grog, and some lemonade.

I wish I could be amusing, but this quiet, idle life gives nothing to say, and so I say it. I try to make you travel with me.

Saturday, 18.—Very fine, hot day; bright sun. It seems that we have narrowly escaped cholera, but we have escaped; and there is America, and Boston will be alongside in a few hours.

The coast has nothing remarkable but flatness and sand. "The walrus and the carpenter wept like anything to see such quantities of sand." It is not a cheerful coast. The most remarkable thing on the voyage is the water's temperature, which I have copied from the log. While we were sailing from cloud to cloud off Newfoundland, we were crossing lanes of hot and cold water, turn about, and that accounts for the condensation. "What is teetotalers'



grog?" said a Yankee. "Animal spirits and water, Sir, I guess," he added, and grinned. A lot of them were drinking large tumblers of cocktails and other decoctions long before breakfast. Oh that I could tell you the story of an artichoke as it was told this morning by a jolly old man!

"Me and Joe, and my wife and his, was dining in Paris; and Joe, he ordered an artichoke. 'What's that?' I said. 'It's an artichoke,' said he; 'will you take some?' 'No,' says I. 'Mother told me to be sure to eat artichokes; I'll have one for myself.' So when it came we looked at each other, for we was green. We didn't know which end of the animal to attack. So first we began at the hard end, and that pricked our mouths; and we didn't think much of artichokes. 'That can't be right,' says Joe. So we began at the other end, and scraped out the middle and ate that. 'My,' said the wife, 'I was that ill, that I had to leave the table. It's all prickles and hairs, and they stuck in my throat.' Well, we did not think anything at all of artichokes that time, but next time we got a man that knew how to fix it, and then we liked them well enough, I guess. Yes, Sir, that's so!"

And now I shall close this letter with love to everybody from

J. F. C.,

Vagrant.

P.S.—A York man on board has £4,000 in gold; so there are greater fools than me in this ship. I have only £200 in gold for emergencies.

Log.—Friday, 17.—Cold, wet, misty, thick, and disagreeable dirty weather. In cold water. The fourth officer says that

the arctic current sweeps round Newfoundland and down the whole American coast to Florida. In winter ships get so frozen that they have to turn back into the gulf stream to thaw. They often come into New York with their sails adrift, being unable to furl them. This about lat. 40, south of Tiflis, Naples, Madrid, Lisbon, &c.

Saturday, 18.—Very fine, hot, bright day. Out of the cold water. Last night the comet's head was under the horizon, and his tail nearly reached the Great Bear about eleven when I looked at him. The sky was very clear, and the stars bright. We had got out of a cloud, which was resting upon cold water. We had passed through a streak of a local glacial period.¹

Discoursed the doctor on matters sanitary. It seems that we have had English cholera. It broke out suddenly amongst the steerage passengers in the fog banks, fifty cases at once, and ceased as suddenly as it came. When the cholera was in London in 1854-55, and I Assistant Secretary to the General Board of Health, medical theories abounded, but the most sagacious of the men who had studied the art of preventing disease admitted, behind the scenes and off the stage, that they *did not know* how to account for outbursts of cholera. There are many things that nobody knows, and those who know most know it best. Our doctor did not know, so he tested the water, tasted the food, and routed everybody out to dance in the air and sing. That was a sagacious medical student, but

¹ The results of observations and remarks on this branch of geology were put into the shape which they now wear in these volumes. Those who care can skip the letters, or the paper ; read either, neither, or both.

why should health suddenly return as we passed from cold sea water and chilly fogs in summer to bright sky and a warm climate? I don't believe in curing cholera with "rosa crina" or "drops o' brandy," or a dance of death and there was nothing wrong in this well-found ship with food or water.

The pilot, a neat, well-shaven, polite man, politely touched his hat and asked leave to try my aluminium binocular. He gave it back without remark. I saw what he said to himself as well as if he had a pane in his stomach "The field is small and the clearness middling, but the Britisher must be very proud of that shining thing, and won't hurt his feelings." I hope he saw inside of me, for I thought the pilot a very good gentleman, who would neither tell a lie nor speak disagreeable truths needlessly. The aluminium binocular was made for magnifying small objects, to wit, for looking at a horse in a race, or at a pretty face in a large theatre. It was made bright to attract pretty dears by shining. It would have scared the deer out of a highland forest, and it did not suit the pilot at sea. He wanted a large field and low power, and much light, by which to find a ship or a light in darkness. I knew all that, but those who make aluminium glasses to sell for fifteen guineas, and those who buy them don't seem to study optics for vagrants.

Great lots of ships and three large black whales made everybody to look through binoculars. When I had found my whale I could see him very well with the handsome gift that was given to me to see the world with. But when I was looking for my whale he dived and I often miss

the sight which others saw with cheaper glasses, made for rough work. There is a place for everything, and matter out of place is a definition of dirt. But that which we hold dirt cheap is dear to others who know the use of it. Everybody who owns an optical instrument holds it to be the best that ever was made or used by man. Long-sighted boast that they can see birds far away; short-sighted that they can read small print. It's a blessed provision of nature, for everybody is pleased and blesses his own eyes, and his opticians, if he wears spectacles.

Presently a lot of tugs came poking about us, asking questions and news. They were Press-boats, I believe, carrying the "Press-gang," as one of the fraternity calls the fourth estate. I don't know a more amusing fraternity to fraternize with. Then the sun grew so furiously hot that we crept under boats for shade and longed for an awning.

Then came the quarantine boat and stopped us. We had a clean bill, thanks to the doctor's prescription of jigs in air or to the healing art of nature, and we went on. We passed forts and islands, and rounded hills of rolled drift cut into by man's hand and by the sea. Then we went to the elevator and turned the ship round for the dock. *Elsie* and *Emily*, who had followed us for a long way, got side by side and stuck their noses against our port quarter, and then, like a couple of amiable whales or dragons, they snorted, and pushed, and panted, and went ahead full speed like their country, till they got our stern round, and the head the right way, and then we, too, went ahead and into the Boston dock, about noon. Then everybody warmly shook

hands with everybody, and we scattered. This corporate body, ten days old, was dissipated.

The custom-house officer in the cabin made us sign a declaration. Then he asked me, solemnly, "Will you swear to it?" "Yes," said I, "and kiss the book if you have one." But he had not got a Bible handy. Then we were searched, and I passed free, being too old a bird to carry anything worth bribing for. It so fell out, as I was told, that a passenger by this same ship landed at this same port smoking a long cigar. He had signed all the declarations. He entered into agreeable airy converse with this same custom-house officer, or some other as 'cute, and he offered him a magnificent cigar. The other accepted it and said, "Will you favour me with a light?" He took the long cigar, and held it fast, and ripped it up with a pen-knife as sharp as he was, and out of the mouth end of the burning roll of baccy rolled contraband diamonds worth untold dollars. The miserable owner who tried to cheat these authorities was detected and disgraced, nay, worse, he was fined. Now, the best and cheapest plan is to have a clear conscience, and then you clear your boxes without bribing very clever men. If you have a weak place in your inside, custom-house officers see it, even through blue spectacles, and they go for you at once. I never smuggle, for it is of no use, unless I bribe, and that is costly and unsafe. Some clever men are honest. Once upon a time I tried an experiment at Southampton. I had nothing worth taxing, and little worth anything to anybody by way of personal property, but I was arriving from lands of brandy and cheap cigars, and I had a pair of wooden shoes. These

I put into my pockets, and over my face I spread a mask of guilty consciousness. I walked to the side, nervously jerking towards the place where these sabots were concealed. A custom-house officer accidentally touched my clothes. "Have you anything to declare?" said the man in authority. "No," I said. "Have you anything contraband about your person?" he said, with emphasis. "No," I said. "Will you allow me to see what you have in your pockets?" "Yes," I said, and produced a pair of sabots, with sheepskin covers, fit for a small French child. "PASS ON, SIR," said the officer.

As I passed him, so I passed the customs at Boston without paying a red cent, because not one red cent was due by me to Uncle Sam. A friend who landed elsewhere with much property had to pay several pounds to escape heavy duty. All Uncle Sam's children are 'cute, but all are not quite so honest as those who dwell at Boston, the "Hub of the world." Let me explain, as some American writer said. "The world revolves on its own axis once in twenty-four hours, subject to the constitution of the United States." Boston, according to Bostonians, is the pivot on which the whipping-top revolves. Britishers whip the world, we whip the Britishers. Boston whips the United States, and is the Hub of the world.

I got into a coach on C springs, with luggage strapped on behind, and recognized the conservative element of America in this curious old family coach. A drunken cad of an Englishman was drunk within. I would not be seen in his company, so got on the box in the sun and felt it. I also felt the jolting of the family coach on exceedingly

bad pavements, and wondered how the hub stood it. Bostonians are proud of crooked streets and old houses, as they are of their old families, the oldest in the States. But this old family coach on C springs had to get its hubs and wheels into floating stages and to go ahead with its load, and it went ahead. Somehow the old thing runs upon all fours, with the rest of these United States. It ran me into the Parker House, where I borrowed a dollar and paid like an honest citizen of that world which is subject to the constitution of these United States, which I left fighting like fiends in the fall of 1864. They failed to upset their family coach then, and it is running with drawing-room cars now. It did me good to see that old English lord-mayor's coach upon C springs, but it shook my bones till my teeth rattled. A hack is a thing like the old London hackney coach, which I can just remember. It was dear to me as an old friend: too dear; for the fare asked and often paid is about 19s. for a couple of miles. Four dollars and fifty cents to the Parker Hotel.

NO. V.

BOSTON, U.S.,

July 19th, 1874.

MY DEAR MOTHER,

This is a change, and I am not sure that it is all pleasant. From fog and 53°, and the howling of fog-horns, to fierce sun and 85° in the coolest place I can find. I cannot recognize the place at all. Since I was here nine years ago the town has been burned and built, a bay and a marsh have been filled with gravel and built on, trees have grown, and public parks and gardens have come into being. Further, this is Sunday, and I can't get into anywhere. I have been

to church ; and I have been to fetch a walk with an umbrella over my head. I hear French and German, various Irish accents and some Yankee ; the majority seem Europeans.

I drink lemonade and read rubbish in the papers. As soon as I can I shall be off to Niagara to bathe and draw. I don't expect to hear from anybody till I get to San Francisco, if then. The ways of this house are to pay two dollars for a small room on the third floor, and pay for anything eaten at any hour. I paid two dollars for a very moderate dinner, and eighty cents for a moderate breakfast. Cheapness is not the peculiarity of these States, but everybody seems bent on champagne, so prosperity ought to abound. I am going to a spiritual séance, if I can find it later. By my lack of employment you gain letters, and my brains repose, and now I am going to sprawl in my bed, and ruminate.

By the way, I found a whole fleet of small *Castalias* careering about on ponds. They are double boats with a wheel between. The man sits in a chair, with a leg on each side, and drives the wheel like a bicycle. In all essentials the plan is the same as the *Castalia* and the boats rocked consumedly.


I did find the séance. It was free, in a public lecture room. A pretty girl, who was flirting a good deal with one of the men on the front seats, got up and went to a piano. Three others joined her, and when the Lady Medium, and a man came in they solemnly sang a hymn rather well. Then the lady recited a kind of extempore prayer from the platform, and then the four sang again.



Nextly the lady delivered an oration with extreme volubility and wordy tautology. She repeated for an hour phrases which meant, "Set a good example to your little children," and I nearly slumbered. The peroration awoke me, and a hymn.

Then the male person announced that the female person was prepared to answer questions. Nobody spoke for some time. At last an old party, with a bald head and gold spectacles, a typical development of wonder, whom I noticed at first, asked, "Do spirits of those who have committed crimes ever return?" The lady answered at length, "They do return." Manifestations quoted from the spiritual telegraph were mentioned in proof. Cards with questions were handed in, and while the choir sang the lady wrote, acting thought, and putting her pen to her ear, as if that spoke to her. Then she got up, and in a crying voice uttered oracular nonsense, of which I could not catch the drift, not knowing the questions. In the midst I got up and bolted. Another séance of the same kind was going on on the opposite side of the same street. Now I am puzzled! I don't quite know whether this woman is crazy and "run" by rogues, or a rogue herself. The audience seemed grave and earnest, not at all disposed to answer my bantering question "who may the old party in spectacles be?" If the woman is a humbug, she is the most blasphemous specimen of the kind I ever encountered. She makes her money by private consultations, I suppose. Anyhow that was a common Boston spiritual meeting, and something new to you and to me.

Monday, July 20.—This is desperate heat. The sky is clouded and there is a breeze from the west, but 75° is the




coldest that I have found, and now it is 80° in my press. I have got coin and I have been to the Natural History Museum. It stood in a wide open space, strewn with bricks and deceased cats nine years ago; now it stands between a large church and a large institution of some kind, and long streets of grand brick houses file off in all directions, while tall trees, ponds and deer paddocks make Boston common beautiful.

I read the account of Montana and its geysers, and studied the Californian State map, and nearly fell asleep amongst the skeletons and stuffed birds and rocks and books where I read for Frost and Fire, when I was last here. A lady assistant clerk sat working at her desk and papers all the while. I came back in a 'bus, and sprawled about till dinner time, and now I am going to feed. There are, and there will be, no secrets in my letters, and you may as well read my journal at home. That will save me the trouble of carrying it, and reading it as I go along, and so I wish you all good-bye, and hope to hear from you when I get to San Francisco.

J. F. C.

P.S.—Roused by the enclosed card, I went to the parlour expecting to find Alicia and her brother. Found instead a benevolent white-haired man, with gold eyeglasses, and a pretty little daughter, who asked me how I liked Peru. Explanation: It seems that there is another John Campbell in the house, whom they had never seen. Told them that crows and Campbells are in all quarters of the globe, and went to dinner; now I am going to bed.

Wednesday, July 22.—Niagara Falls. Here I am again after ten years, more charmed with the place than ever. Vide



"A short American Tramp." Yesterday at seven the thermometer was 75° on a marble slab in a window at Boston, and the heat was oppressive. At 8.30 we started in a Drawing-room Car, and the change was instant and marvellous. It was just as hot, but the air was fresh and moving instead of stagnating in a hot, low-built, damp town.

In the Republican country, 1st, 2nd, and 3rd class carriages would never do, so they run drawing-room cars for which those who will can pay and be happy; mine this turn cost 2½ dollars extra. It is a long lofty room, set on four pairs of wheels, of which two pairs are on a boggy at each end, consequently the long beams take off all jar and rattle. All down the sides are velvet-covered chairs, with spring seats, each on a bronze pillar turning any way. The sash windows are large plate-glass affairs, into which, when open, an attendant nigger fits wire blinds to keep out the dust. Green sun-blinds draw down, so there we sit at ease, each in his own hired chair, and look at the country as we whirl along at great speed. Truly the Yankees know how to travel by rail. Those who want to smoke find a cabin in the fore part of the car, those who want to drink find iced water, and those who want to wash their dusty faces and "slick their hārr down" can do that to their hearts' content. The cabin of a small Clyde steamer is about the thing.

Now and then as we ran up the Green Mountain glens the train slowed. Curious to see the reason, I went out on the platform, and looked down into a rocky gorge. We were passing over a scaffold. A couple of rows of upright beams supported us, and a network of narrow laths bound them together, but if we swung that structure, down it

would certainly go. Therefore we went slowly over these bridges. The workmen offered us mint as we passed them slowly.

From Boston to Springfield we crossed hills 400 feet high. Then we crossed the Green Mountains 1,500 feet, and ran down to Albany on the Hudson. There, at three, I dined in 15 minutes, waited on by cheerful neat damsels, who gave me ice creams and ginger ale. Then we ran up to the Mohawk by Utica and Syracuse to Rochester, where I changed cars at about 10 P.M. By two I was in this cool charming room with the rush of the river to hush me to sleep, and so I slept, in a draught with the glass at 66°. That's pleasant!

A collegian on the cars fraternized with me, and he was the only fraternal being. The rest were absorbed in absorbing oranges, in knitting, and nothing at all. Like loafers at the hotels, the populace seem to enjoy sitting in chairs, doing nothing, at an open window where the wind blows. In this weather I understand it. My friend wanted to know about titles a good deal. He seemed to be a good green gentleman. At Saratoga there has been a grand University boat-race, and athletic games of all sorts. The papers are full of the meeting, and of murders and scandals and sensations. My friend, who had been to Saratoga, described a mob.

The next noteworthy personal matter that I can think of is the difference between races of men. At the Parker House all the servants were Irish. Some were green as the Emerald Isle, and none were like French and German waiters, but if they were lacking, it seemed to be want of education for the work. Left to himself, one always

brought me potatoes. I wrote down the name of a soup, but he brought me goose and potatoes. That was the result of education, I suppose. Here are niggers and no Irish, and they seem to be born waiters without much brains. Pat may influence elections and rise to be President; Sambo never will. "My name, sir, is Lloyd," said a young darky last night, "call for me and I will look out for you." I bade him call me at six. About eight he came. "I told them to call me at six," he said, "but they forgot, so I am come at eight." "Now go and brush my clothes and bring them back." He went and came. "I did not hurry myself, you see," quoth Lloyd, "I just took my time and brought them right square off." I never am in a hurry, least of all here, so I did not mind. Next we got to a bath: it is down in the basement, a large square room with a waterspout dashing into the bath in the corner. I got hold of a rope and held my back in it, and the spray flew ten yards into the room, a fountain. One feels as if bones were flag-poles, and flesh fluttering bunting in a gale of wind. "It's awful wholesome," as the black Welshman said when he shut the door and left me. But the born waiter forgot to give me a towel, which was not intelligent. A whole army of them were drawn up sunning themselves at the breakfast-room door, and very neat and clean they looked in white. Every shade of black and brown, every variety of cross, shines through their queer, quiet faces. The olive-green ones sell books and papers, the sepia men wait at table, the blackest black boots and brush coats, and bear burdens. But no amount of dilution seems to make a blacky white enough to keep a hotel, or own a shop, or do anything that an Aryan does.

I am quite sure that no Africaryan will ever run an Emma mine or an Erie ring. But the potato man may in time, for he has brains to be educated, while darky's head is like that of the Neander-thal man who was like a monkey. It is so precious hot and bright outside that here I have sat smoking and journalizing, and thinking about Celts and Niggers, enjoying the cool and the sound of the waters, instead of going out to see the Falls. That is the one great advantage of travelling alone. If I had some energetic person to lionize, or somebody always in haste to get on, I never could have dawdled away a whole sunny morning in this idle fashion. I fancy I hear my best travelling chums rushing about with letters of introduction, or C. G. charging about after the next trains for the west, so as to get somewhere else in a hurry. I never was in a hurry, and I always have been hurried till now, and now I have got over 550 miles in perfect quiet and repose. I was more hurried between home and the station. Now I am 4,730 miles from that station, and I have never been hurried or worried since I set out. If this goes on I shall become a peripatetic philosopher. "Air you going on the St. Lawrence, sir?" said a human olive to me. "I, sir, am travelling circumperambulatorically," I said, gravely. The olive gaped, and a white timber nutmeg of a Yankee grinned intelligently. Now I shall go out to Goat Island, and do something for a bait to catch curious creatures. I never fail to trap somebody, if I only sit down and draw, or look through a glass at something. By the way, you may like to introduce a domestic notion which is in full swing under my window. An upright post with four long arms is turned by a small water-wheel; from arm to

arm are clothes lines many, and on each are many towels revolving edgeways in the sun. They dry and bleach in no time. The machine has been click, clicking ever since I came. What an almighty fine water-power this little dam at Niagara is, to be sure.

I went to Goat Island and found 97° rather too much. The place was crowded with excursionists, so I wandered back and dined, and then in the cool of the evening wandered down and sketched.

Thursday, 23.—I have been back to fetch my cup which I left behind me, and there I found it at the feet of a man who had not seen it. That's luck! I have been making rubbings, and buying photographs, and sketching from the suspension bridge, and fixing and mounting the result of my morning's work. A Briton with a very strong accent of Yankee-English joined me, and we fraternized. He is going my way, and we may fraternize more. Surely this is one of the pleasantest places I ever was in! That morning water-spout is worth the journey. Now I shall post this and go on with the journal when the fit takes me.

J. F. C.

No. VI.

NIAGARA,

Monday, July 27th, 1874.

MY DEAR MOTHER,

Here I am still. I cannot tear myself from these baths and this beautiful place, but to-morrow I must onwards, so I write my log. I have made nine sketches and three rubbings, and I have bought a lot of photographs. But nothing can give the faintest idea of the beauty of these falls. The water is a sort of Prussian-blue emerald-green





colour where it is clear of air bubbles and deep. Where it comes over the Horseshoe it is like nothing else in the world. It is a great green waving water curtain, edged with dark purple, where the red rock edge is seen through falling water four or five feet deep at least. Nearer and thinner and more broken, a promontory of falling water tells warm purple against the green Horseshoe gulf. Great stones below glimmer through the spray, and change from black to purple, and pale blue, and vanish as the clouds of spray go and come. Dark green and warm purple waves below fade into the cloud like the stones. The white Canadian fall shines white through the cloud like silver gauze, while the cloud itself changes like a dim rainbow of purple, and green, and blue, and yellow. Last night the setting sun lit up a great orange cloud behind the dark bank of trees in Canada, and the contrast made the falls like liquid jewels. I sketched, but Turner could not have imitated this. I defy all painters to copy Niagara. I have got the route from a Manchester man. I have invited him to your house, of course.

Now for some of the legends of Niagara from the barman. "You see, sir, these hackmen will tell you a lot of lies; I'll tell you some true stories. There was a doag, and quite a many people see him go out into the river on the Canadian side, and they see him carried over the falls. They never thought to see more of him, but that same evening Mr. doag comes hoam, he ran up the path down there by the suspension bridge, and he was none the worse. That's the only living creature that ever went over the falls and lived. There was another doag, and whether he went over the falls or not I don't know, but he swam ashore down by the old

suspension bridge, under the rock where no man could get at him, and there he lived for two years. Of course he had plenty of water down there, and they used to throw him down food. They call the place the Doag Rock now. There was a party of eight people went out in a boat at Buffalo. They upset the boat and five were drowned; one was a girl, a dish-washer in one of the hotels. Wal, sir, her body was found under the Cave of the Winds, without a stitch of clothes, and awfully knocked about, and she was buried there on Goat Island; that was quite lately.

"There was another girl came all the way from Chicago to commit suicide here. She jumped over the suspension bridge to Goat Island and she was washed over the American fall, and her body was found without a stitch of clothes on, and with an arm off.

"There was a man rowing over the river above the rapids; he broke one of his oars and he was helpless. He went over the falls and he was found in five pieces. There was an Indian, too, who went over the falls in his canoe, and never was found at all.

"About six weeks ago an old man called MacCulloch was painting the bridge at the Sisters' Islands, and he over-balanced himself and fell into the rapids. He did not know where he was or what he was doing, but he saw a rock and threw his arms round it and held on. There he was for two hours; but Conroy, the guide at the Cave of the Winds, got a rope. He did not tie it round his body, but wound it round his arm. He went in above the old man and came round above him and so got to him and gripped him, and the people on shore hauled in the rope and got them landed. Unless

that old man had caught that rock nothing could have saved him ; he must have gone over the falls, for he could not swim and he had no chance. And you may see the man over there for thirty-five cents, and the picture which Bierstadt painted of him and Conroy in the rapids ; there he is, a-holding on with one hand, and holding his putty-knife in the other, stuck into the rock. Yes, sir, that's so. Brandy smash ! Yes, sir. Soda cocktail ? Yes, sir. There's a man going to walk over the river on a rope to-morrow—he's like a cat on the rope. He lives just over there, and he was a hackman here before he took to rope-walking. He will do it every day for five or six dollars. The distance is nigh about a quarter of a mile, and the height to the river is about 180 feet. The man that did it first jumped off the rope three times. The boatman says that he drank a pint of brandy each time he took him out of the water. That man was drunk, but he walked the rope. He was a Frenchman."

I have stayed a day longer to see the cat-like hackman walk the rope where Blondin did it, just below the new suspension bridge. After that I shall go to Chicago and see the ruins of the last fire which took place some six weeks ago. To be continued if I see the man walk. Fire and water must be gone through in studying the works of frost and fire in Yankeedoodledom.

Yesterday it rained, and to-day the sky is clouded and the temperature cool and pleasant at 70°, with a nice breeze. I have been roasting at 93° and 95°, and I am gradually melting away.

After dinner I saw Professor Fear walk over the river on a slack rope very well. "The rope is very bad, sir," he said,

"it creaks just like a fellow in creaking shoes walking after you. My name is Fear, sir—Professor Fear." "There ain't much fear about you," quoth I; "there's a dollar for you." "Wal, that's the first dollar I've seen to-day. Thank you, sir. I'm a young Canadian," said the Professor. He had on a fancy Indian dress, and carried a tin can for contributions. There was not a sign of nerve about him. Hundreds of excursionists sat about the cliffs who had been picnicking all over the place all day. Nobody cheered, only two or three clapped their hands. Very few clapped their hands into their pockets, and there was a general tendency to walk away from the terror of the tin can. That is not peculiar to America. It's a kinder human natur'.

"It's a very good world that we live in,
To give, or to spend, or to lend;
But to beg, or to borrow, or to ask for your own,
It's such a world as never was known."

Adoo,

J. F. C.

I am off to-morrow.

NO. VII.

TREMONT HOUSE, CHICAGO,
Wednesday, July 29th, 1874.

MY DEAR MOTHER,

Since I posted my last at Niagara I have made 500 miles, and I have made acquaintance with a Pullman car and a Canadian Scotchman—both very agreeable. The one was long and the other short. It rained like Niagara all yesterday morning, and I smoked and looked at the rain till one. Then I got into a 'bus and drove to the depôt,

where I found an old English stage-coachman established as luggage-master. He checked my luggage, and I never saw it again till I found it in this room. At the suspension bridge I changed cars, and paid three dollars (say 12s.) extra for the Pullman car. Mine was named "The Favourite." It is a long and lofty room, with seats in pairs to hold two pairs of people by day; red velvet seats, with large excellent windows to look out of on either side. Smoke-rooms and dressing-rooms are at each end, and all magnificent with marble and mirrors. At one end was the dining car with a kitchen and black waiters in white jackets.

When I got in I had to pass through a whole carriageful of people, each pair with a table let down and food thereon, and tea and coffee and all manner of luxuries. I was very hungry, but had to wait. Presently the satisfied returned to their seats. I went right into the drawing-room, which was a box near the kitchen, lined with red velvet and mirrors, and set out with a table and glasses. There I ate an excellent beefsteak, potatoes and green corn, peach pie, bread, butter, and hot coffee, with iced water to finish with. I might have had clams and berries, and goodness knows what else, but I had enough, and paid five shillings. All this time it was raining and we were travelling fast to Hamilton on Lake Ontario, passing over Niagara Rapids, and rushing through farms and forest, which would have cost a traveller week to pass a few years ago. (Here make sage reflections about steam as I did. You can make them better than I can write them.) Dined, I walked through the cars, and smoked in the room provided with chairs, matches, cushions, and iced water, and there fraternized with a

countryman. When five years old he migrated from the Duke of Argyll's estate in Ceantire. "I am the Duke's cousin," quoth I, "and my name is Campbell." "Bless me!" said a Yankee, and offered me a cigar, which I accepted and smoked gladly. Thenceforth we all colloqued and smoked, while I studied the barometer and the passing geological section, of which I have made notes for my own private log. By ten we had passed Paris and London and Windsor, and then we went afloat and crossed to Detroit, seven-eighths of a mile, in the glorious moonlight. The train broke in two. The tail went first into a barge and the head followed on a second set of rails. Then the barge steamed down stream till all was right, and then up stream till it hit the other end of the railway on the American side. Then the head went ashore and hooked on the tail, and the whole train roared and rang itself into the depôt and panted a little, and whistled and hissed, and subsided into repose, while the attendants oiled the joints of the monster and rapped its bones in the usual manner. Then it took a fit of going, grunted, and set off without warning, as is the fashion of American trains. I scrambled in and went to bed. The sloping roofs on either side of the cars had come down as shelves. The seats had somehow turned into a lower shelf, a foot-board and head-board divided each compartment from its neighbour, and there I found a bed broad enough for two, with pillows to match, and striped curtains hung up, and sheets and blankets; so I doffed my coat and shoes and turned in. Presently I found that we were many and the air frowzy, so I opened my window and pulled down the blind, and slept like a top till sunshine told me to get up.

Now because the cars are long and springy and because they are exceedingly well made, the motion is utterly unlike railway motion in England. There is no sidelong rattle and roll, no jar and little noise. With an easy swinging, seesaw movement on I went, feet foremost, sleeping as if I were at home in my own bed. So that is my first experience of a Pullman sleeping-car. While I was washing my face, the attendant Nigger had changed two beds into a roof and four seats, and I sat on one, and looked at my neighbours, male and female, and thought how exceedingly uninteresting we all are when half dressed. And so I got to Chicago as fresh as paint, fed and washed, found my luggage in my room, and wrote this letter, my journal and my meteorological log; and then I went out to smoke and see the ruins. This town, which is not so old as I am, which was utterly destroyed about three years ago, now is like Paris for size and bustle, with wider streets and shops nearly as grand. This house is a small palace, with gas and water everywhere, red velvet and marble, and mosquito curtains, walnut presses, and room to dine many hundreds of guests. The old house demolished by the fire was hoisted bodily out of the mud after it was first built. This is a go-ahead country for railways and city building, and that's a fact, I guess.

Thursday, July 30.—About dawn this morning I was awakened by an unusual sound below, so got up, and found that a fire was going on over the way. The sound was that of an engine arriving. Presently it was spouting vigorously. From time to time more steamers arrived; they came leisurely trotting with a pair of horses, hissing and sputtering;

and as each came up the dragons at work opened their shining eyes and shone at the new comer and squeaked a shrill welcome. Then each in turn began to blow off a column of steam and sparks half as high as the houses, and the whole flock spouted water into the fire. It grew till the flames came out of the roof, and they got the better of it. More steam dragons came up and were welcomed, and then they stopped and went away again, as they were not wanted. Three or four remained working, but they had beat the fire, and so I went to bed again, and slept. There was no crowd, not a dozen spectators in the street, and nobody seemed to care a jot for the fire. The steam water-dragons had the whole to themselves. About eight, three great roars from a passing train or from the shining dragons of the brilliant eyes awoke me again. I looked out, and there was the street looking as it looked overnight—busy and careless. The place burned seems to be a warehouse for pipes, leaf-tobacco, and carpets. Only two or three of the opposite neighbours lit their gas in the heat of the scrimmage.

I have got my tickets for San Francisco (118 dollars), and mean to start to-morrow, and stop at a great many places by the way. I expect to find letters when I arrive. I hardly expect to have time to write more of this kind, but when I have time for that purpose I will tell you my tale. Meantime good-bye.

J. F. C.

Log.—One of my fellow-travellers hereabouts was a timber and squared oak merchant returning from starting a raft about 1,200 feet long for the St. Lawrence, and bound for Milwaukie and elsewhere to fell more forests. Oaks grow

over this tract and farther north and west. My acquaintance came from a land where the forests are chiefly birch, and the oaks are underground in peat bogs. He cuts the land and cuts timber "right away." The soil is deep and rich—black loam over strong clay. When they sink the soil they get to lime and oil. Geologists say that coal is there, but no one has tried as yet. Lake St. Clair is a good place for ducks; one man killed eighty-two brace in one day at a place on Lake Erie. That belongs to a Game Stock Company; men go there and pay some dollars a day; a punt man is servant and included in the rent of shooting. Sportsmen pay, and slay ducks in September and October.

"If you come back in the fall," said my Canadian Gael, "I will get you plenty of good duck-shooting." "Thank you," said I, "I am going on westwards till I get home D.V." From all that I hear, Highlanders make excellent farmers and lumberers. The Scotch generally flourish. So do Norwegians in Minnesota. The Norse girls are famous to bind men. A girl will earn three dollars a day: they are as strong as men. No wonder that men marvel at the strength of the ætar Pigas when they live amongst weak women as I see hereabouts. One MacLellan, a Canadian about thirty-five or thirty years of age, beat Dinnic quite easily, and all Canada is proud of the athlete. In 1847, MacLellan from Islay beat all Inverary and all comers. The men about Bowmore are flourishing greatly. The way to Bowmore was the way to church when I was young. The way to go there now is to go to Toronto and North-West.

"And how do you account for the fact that trees grow in these parts and do not grow elsewhere west?"

"Well, sir, the only way that I can account for it is, that within some late period the country was submerged," said the feller of oak forests. "Some part of the prairie is lower than Lake Michigan. They dug a little, and now the water runs out westward to the Gulf of Mexico instead of running eastwards, as it used to do, into Lake Michigan on its way to the Gulf of St. Lawrence." I wonder how many practical men I should find in the old country able to tell me so much that I wanted to know while whirling past London, Paris, Windsor, and other towns whose namesakes are here in the wilds. This is a grand country for men with brains to migrate to. But it's not all velvet. I heard of the proud bearing of trains of Highlanders passing through this land suffering the pangs of hunger and thirst, dusty and footsore and travel-stained, too poor to buy the food for which they were too proud to ask, and fed by those of their kind who had gone before and had enough to spare for kindred souls and bodies. The fact remains, emigrants have a rough time of it unless they carry enough for their needs. Natural selection of the strongest and fittest has made this strong population by slaying the weak.

All the people who come out here are not quiet, sober, industrious sons of toil. After writing my letter home I went to see the burned town. I wanted something to carry me, for the heat was terrible, and hailed a hack, as men hail a hansom. The fare was five dollars for two hours—say about one pound one. I took the cars instead, and paid five cents (about 2½d.) for leave to drive all over the town, for

the whole day, I believe. That is Republican. If anybody chooses to be an "Aristo" and hire a fiacre, he must pay for a hack. I drove Republican fashion, and walked to the water-works and 133 steps up to the top of a tower 200 feet high. The tower rocked in the strong westerly breeze. The view over the town on the flat shore, with the blue lake in a heat haze, was curious and strange. Why, I know not, but it took me back to Kuopio in Finland and to the top of a tower on a hill there. This tower is the highest point between these American lakes and the Mississippi. The engineer in the pump-room asked tenderly after the welfare of Liverpool. He had traded there as steam-boat engineer. "There's three or four fires burning now," he said. "There's a lot of darned rascals in this town. They do it on purpose. They telegraph here about fires, and they have not rung them out yet." I know very well why that short speech took me back to Paris and to Easter 1871; and showed me the crowd of faces about the Porte Maillot, where all the rogues in the world appeared by deputies and representatives from Europe and from America. I began to realize that Red Republics are possible in older Republics. I noticed that an American fly-wheel was cast in many bits. "I would not like to see it make thirty revolutions," said the engineer. If Boston be the Hub of the world and steady, Chicago seems to be at the circumference; and the wheel may go off at a tangent if it goes too fast, and makes red-hot revolutions. A little of the frost of Scandinavia and Scotland may be useful where there is so much petroleum, and where there are so many petroleuses. "That tower of yours is rocking," I said. "I should not wonder if it came down some day." "Please God it

don't come this way," said the engineer. "Amen," said I.

I took the cars again, and drove up State Street to see the ruins of last fire. They *are* ruins. Those of Paris which I saw at the end of 1873 were nothing to them, and yet they were "some pumpkins." Here and there a tent or a shanty sheltered the ground-landlords, and Germans were selling lager beer from sheds. Directions of the burned-out citizens—doctors, dentists, merchants, parsons, and all the classes who own property, and wish for a quiet Republic that builds waterworks to extinguish Red fires—were stuck about on boards. The black ground under them was strewed with glass and a tangle of pipes, of all kinds, sorts, and sizes, and yet fresh fires were still red-hot, with water playing on them to extinguish them, pumped out of the blue lake by that fly-wheel in many bits, which the engineer would not like to see make thirty revolutions. I went home to my own room, and read the daily papers, to my great discontent. If the American people keep their press-gang going at such speed in such a mess, they have need of a steady old Hub at Boston to act brake for the flying-wheels of their old family coach, and some autocrat at their breakfast-table to give them wholesome mental food. All the people who come out here are not sober, industrious, hard-handed sons of toil. The Ouvrier of 1848 and the Fenian of 1875 are here in force, stirring up strife and poking fires in the engine-room. *Anges d'en bas.*

I saw a great deal between Chicago and Cheyenne which has gone into the geological pigeon-hole. At the Missouri I fell in with my first Indians. I stalked, and tried to trap

an old Pawnee woman. As soon as she twigged what I was about she covered up her towsy black hair and skedaddled. It was all in vain to hide behind posts and inside cars. She was very wild and picturesque, and far too quick to be caught flying with a pencil unawares. She came from the reservations to the North. A still more picturesque boy, in red tights, with a bow and blunt arrows, wanted to shoot coins, and so far as I know continues to want. Neither understood English. At Fremont more Indians came about the train with papers, begging: "John is a good Indian; give him a dime." As none of them would let me draw them, I got old John, and wrote the numerals. Here they are, as near as I can spell by ear.

1. Ask.
2. Betku (very soft).
3. Towet.
4. Schiëte (soft and sibilant).
5. Sioux. This explains the name of the tribe of five nations.
6. Sioux aufen. (Very soft) 5 and 1 = 6.
7. Betku sioux aufen, $2 + 5 = 7$.
8. Towet sioux aufen, $3 + 5 = 8$.
9. Iuxidewan.
10. Ti Iuxide.

Now here is a Finnish numeral, and a Norwegian. *Ti* = 10. *Iusi* is nearly the sound of one—*de* I do not know what to make of, but the word looks like Ten the first.

I pointed at John and said "*Sh-qua*," which I knew of old. He looked very indignant and grunted "No." "*Papoose?*" I said. John gathered his draperies and snorted. He was

neither a woman nor a child, and he would have nothing more to say to a pupil who insulted his master. He got his dime, that was all he cared about, unless it was the dram that he bought with it.

I tried to catch a *Sh-gua*, who was nearly black and very striking, but on went the train into the region of the Platte river. At tea time, at Grand Island, many Indians came about. I saw their camp. One got talking to a knot of passengers, so I managed to book him. He looked like a noble Roman senator, with his black scalp locks, and red blanket draped about exceedingly well-made legs, and a light active body, carried by neat feet, with high insteps. His bow and arrows were in a bag of deerskin, with numerous hanging tags and ends. The general colour was warm yellow. Blanket red, shirt blue, hair black and coarse, skin very dark olive, sepia and vandyke brown, *not red*. Leggings, deer-skin with tags below, like the tails of two fashionable gowns trailing. Deerskin mocassins fitted his neat feet like a stocking. The crowd, as is the way of crowds, called him to look at me, just when I most wanted to look at him. He came, stuck his thumb on his portrait, gazed hard, grasped hard, looked amused and amazed. Then he exclaimed and laughed, and bore himself in a very frivolous manner, exceedingly unlike the Indians of my reading, and off we went fizzing over the plains. I saw my first prairie dog sitting at the mouth of his artificial volcano. It can't rain much where beasts live in open funnels. I saw herds of black cattle in the distance. All the tame kye are coloured, so these were my first buffaloes. I saw great numbers of ant-hills, piles of gravel half-a-foot high, amongst small cacti, some with small



INDIAN MAN OF THE PLAINS.

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round flat leaves, others round as a ribbed orange. The grasshoppers, which have devastated Minnesota and fields of Indian corn all up this line, were in shining clouds all the way to the Rocky Mountains. When we stepped off the cars at a halt, they rose whirring, a glittering cloud. The corn-stalks where they had been were bare sticks. Prairie larks and hawks and antelopes made the list of live stock noticed on this trail. Now it really was curious to go whizzing through the wilderness in a drawing room, looking at these wild creatures from plate-glass windows. As I lay dozing in my bed I could often fancy myself on a well-known Highland seashore, watching a burn digging in sand. The burn was the Platte river, the sand was the bed of the stream, when the snow by melting sends a rolling flood over these dry sands.

An old fellow at Omaha, finding that I could speak French, took a liking to me, and asked where I was going. "To Cheyenne," I said. "Don't go there," he said; "all the men are murderers and thieves: you will have your throat cut and lose your money." "But," said I, "there must be a station and a hotel there." "Non, monsieur, there is nothing of the kind." But nevertheless I went to Cheyenne and found an excellent hotel, and a good station, and very good food, and nobody seemed to have the smallest wish to cut my purse or my throat.

I see no possible reason for trying to frighten me from Cheyenne, so conclude that people who do not travel in America, as elsewhere, need instruction. The country is so vast that different states are as European countries, and their inhabitants are as foreigners. One very pleasant fellow-traveller said that when he first went west, a little boy, none

of the other little boys would play with him because he was a "Blue belly." I remember that Queen Elizabeth called certain Irishmen "Yellow bellies" because they wore yellow waistbelts at a great game, but I forget which American state is inhabited by "Blue bellies." It is said that Lincolnshire lads are like their fellows the ducks, and have speckled bellies and webbed feet. Nova Scotians are "Blue noses"; every state in America in like manner has a nickname, and Cheyenne earned a very bad name indeed when my Canadian French American friend was a little boy.

The little Blue belly bathed and then the other little boys saw that he was of their kind and harmless, and played with him thenceforth. So I went to Cheyenne and saw that it was human and rather civilized. It looked so, and behaved well to me. But the west is a wild country, and wild spirits roam there.

At the station near Colorado Springs two rival drivers had a difficulty. One was slender and vicious, and he pounced down from a 'bus on a big, bluff, bull-headed, prize-fighting sort of man in boots and shirtsleeves, who had been a captain. He forthwith threw his foe off the platform down five feet amongst heels and wheels and sand. If he was slender he was as vicious as a wild cat, and full of pluck. He rose, climbed up, and charged again, bleeding from a cut. Thereupon the big captain got his knob in chancery and tapped his claret, and reduced his face to the condition of a beefsteak well beaten.

He kept on yelling all the time: "I'll kill him! bring me a knife. I'll kill him, give me a knife, I'll kill him." The rest, who kept their hands in their pockets, presently

suggested that he had enough. The bulldog dropped the tom cat, and there he stood dripping gore over the steps of the cars, and shaking. He was beaten, but he did not want to give in. I was looking for the revolver and preparing to get out of the line of fire. "Eh! he's had enough," said the captain; "that will teach you to leap down on me again." So the difficulty ended. Presently the 'buses started for Colorado Springs. But for that savage yell for a knife, the fight was a regular good mill. I never saw anybody get a more complete thrashing, even at Eton, where I saw B——. thrash Windsor Chummy, a sweep, and where I got my own teeth chipped at Windsor fair, and got thrashed by one of the "clods."

MANITOU, NEAR PIKE'S PEAK, AND COLORADO SPRINGS,
ROCKY MOUNTAINS,

No. VIII.

Wednesday, August 4th, 1875.

MY DEAR MOTHER,

From Chicago at 10 on Friday last I started and crossed the plains to the Mississippi, thence to the Missouri, and then up the valley of the Platte river to Cheyenne. I got there on Sunday at noon. At midnight I took a cross train to Denver and got here 180 miles south at dinner time. Two stage drivers had a good fight at the station. Captain Rogers of the Confederate army got the head of his adversary into chancery and spoiled his face awful. This great mountain, 14,000 feet above the sea, is a station for state meteorology. They live up there, and telegraph weather probabilities, and the result is satisfactory, for the weather does accord with probabilities eastward. Here we have rain and thunder daily



in the afternoon, and a range from 60° to 90° . This is a watering-place, called Manitou. There is a large hotel and many small ones, beside a brawling burn; temperature, 50° . I live in a detached cottage amongst some trees, and when so disposed fill a foot-pail and bathe. There is a soda spring, which is delicious, and a very nice iron spring, which is healthy. All the people are sick. "What is your complaint, sir?" said a man to me. "I have not got one, thank you," said I. "Anno Domini is my chief ailment." This is the queerest place I ever saw for weathered rocks. Nothing can describe them; they are not easy to draw, and photographs do not give the colour. They are red and white, and all shapes. Some are like giant mushrooms, others like anvils and figures with flat caps on. Some are spires, and pinnacles, and towers, and statues, and long narrow combs, 300 feet high, with holes and caves through them. The dark greens and brilliant reds against the distant hills beat everything for colour. These are triassic, grits, and pebble-beds, and gypsum and sandstone, all faulted and tossed about in the most fantastic geological fashion. I mean to make more sketches, and buy photographs. Now I am off to see a cañon nine miles in a buggy, for I find walking hard work in this great heat. I mean to go to the top of the peak before I start for Cheyenne again, and pick up my traps and go on westwards. Here my barometer stands at 23400. I have seen Indians in plenty, deer, buffaloes, prairie dogs, and chickens, all out of a window. I slept the sleep of the blessed in the sleeping-cars, and looked out of a drawing-room on wheels at the wild prairies of the Far West. (Here make more sage reflections on steam.) I might telegraph to you



MUSHROOM ROCK



if it were worth while, and yet this place is not ten years old.

Thursday, 5.—I went to my Cheyenne cañon and made a sketch, and came back all right. On the way I passed a lot of prairie dogs. We stopped, and got out the binocular, and I saw the brutes as clearly as if I were beside them. They did me the favour to yelp. My boy, a Yorkshire lad, has had lots of them as pets. He drowned them out of their holes with a pail of water. He also slew many rattlesnakes when he was a sheep stock-boy out in the plains. Dogs, owls, and snakes live together in these holes amicably. Returning, we passed an old fellow riding. "Bheil Gaelic agad?" soon showed that Mr. Blair was a Perthshire Highlander, and we fraternized instantly. He is fifty-four, and grey as a badger. He is justice of peace, landowner, and general manager here at the springs. This morning he came to fetch me for a walk, and we have been dawdling about and drinking quarts of water. The springs are all delicious, temperature 60°, taste excellent, boiling up with carbonic acid, and good for various ailments, of which I have none but laziness and weakness from the heat. We fell in with a workman from Gairloch, brother to the gamekeeper. Of course we jabbered Gaelic, and shook hands a good deal. A Mullman is here, and lots of other Scotchmen, who are all flourishing. Amongst these grand hills they seem as happy as kings; but they take the strongest interest in the old country and all that belongs to it. "Oh, but I was pleased when I came here and saw the hills again," said one to me with effusion.

All my own geological speculations are in the log, where this is to go. The main result is, that I believe this to be

an ancient seacoast, and the weathered rocks the woi waves. I find none above a certain level. I find no n of the "Ice Cap," and have ceased to believe in it altoge Personal adventures I have none to tell. The people pl croquet, and sing and ride in habits, and the women dre long-tailed gowns and swell sleeves. Most of them are and nobody seems to fraternize with me. An Ayrshire who is a good walker, is the only sociable creature I found. So I spend my time much alone—drawing, wri and smoking. I go to bed at dark, rise at daylight, myself to fresh water from the burn, and enjoy life. best part of travelling is sitting still at a pleasant place, Nature's soda-water to drink, or with cataract-baths, those of Niagara.

And now I shall send off this letter and dine. I have dined for two days, having been out all day long. I drunk nothing stronger than coffee for a week. I may you some photographs if they come off the cards. To-mo I mean to try the peak, and if I find it too hard work I stop where the horses stop, and ride down again.

J. F.

No. IX.

SALT LAKE CITY,
August 12th, 18

MY DEAR MOTHER,

I got in here last night and found gas and all o luxuries. Ladies with long muslin trains were sailing trailing about in the dust arm in arm with male sw Some one remarked that single men walked with half-a-do

of women, and these we concluded to be their wives. We heard Norwegian and English of many provinces, and all manner of outlandish tongues, all gathered into this queer mountain basin full of salt water and saints. Something does not agree with them, for they all look seedy and washed out. It is as hot as a furnace, and yesterday morning we had a frost. That sort of thing may disagree with the saints of Utah, or something else may; but the fact is that they look seedy exceedingly.

I went up Pike's Peak only as far as I could ride, or rather scramble, with an old horse. At 90° Fahr., and fifty-two of age and 230 lbs. of weight. I would not face 1,500 feet of rough ground with seven Yankees in good condition to shame me or make me walk my best or bust. So at 12,500 feet above the sea I turned tail and studied geology down hill.

Next day I drank soda spring water and sketched; and on Sunday I went 180 miles back to Cheyenne. On Monday I started at two, slept in the cars as in a house, got up to breakfast on Tuesday and fed by the wayside. At about eight I got here yesterday from Ogden, and here I am writing, drawing, smoking, and living as quietly amongst these Mormons as if I were at home. "*Cælum non animum mutant qui trans mare currunt*;" and here the English Mormons have carried their home ways. Boots is from Yorkshire, another is from Nottingham. Half the wives are from Wales. The master has three, and Brigham Young has fifty. I have none. My chief acquaintance in the cars was an old general, who offers to entertain me if I go south. He is a notorious Indian warrior, and used to scalp his slain men himself, so I am told. He looks rather like Lord Clyde. If I can, I will go see

his place. I also met a good fellow going to New York on the other train, who turned out to be the man to whom I had a letter. We shook hands and parted. And now I must go out and face the sun. I see my shirts drying in the yard, and rejoice in the prospect of clean linen washed by women who are saints. I have no news, and

I am, yours affectionately,

J. F. C.

Loy.—COLORADO SPRINGS. *Tuesday, August 4.*—This is Robinson Crusoe life; all alone in a cabin, with my bags hung on pegs, employing myself as if I were at home. The sun shines through a round hole, and tells me when it is time to go to breakfast by walking along the boards. A tourist bragged that he had been up and down Pike's Peak in twelve hours; he rode most of the way. "I walk like a greyhound," said a slim little man; "I have little muscle, but what I have is good." "I am too old to walk," I said. "You are too fat," said the lean man. "You don't look as if there was much the matter with you," said another, "I had dyspepsia." I hadn't, so I finished my breakfast and went back to the hut.

August 4.—Walked down stream east, and was overtaken by Dr. Hayden, U.S. geologist, on the outside of a horse. He had found me out, and we had some pleasant geological talk to my great profit. I crossed the river on a plank bridge, and went over the sandstone hills wondering. I stopped at last and made a sketch. These red rocks, disturbed by the upheaval of the Rocky Mountains, are faulted right on edge, and are partially turned over at the Garden of the Gods, and elsewhere to the north and south. But the remarkable





feature here is the weathering. The pillar sketched many hundreds. I only drew it because it came in

Great red and grey mushrooms of sandstone seem in the woods beside oak trees. Great masts and of red sandstone stand beside trees, and look as if they part of the same group. Red idols sit on pedestals in of greensward. In short, this is the most fantastic ing that ever I saw away from a seacoast. In ing from the gold diggings of Sutherland" I tried to mushrooms, which there seem to grow in the sea ves them. Here they grow in the forest. Gradu- to think that this must be the old seacoast of the boulder period.

these quaint dry red rocks, I fell in with a man ie dog driving cows. He was born in London, and arican. The cows, I take it, were Ayrshires, and from the Highland hills. I left them and watched They are little brown fellows and make a small sand, which weathers off the stone images. In the a hole at one side. It is a beautiful structure, built and cemented; I had the wickedness to poke into one round hill, and break the dome. Inside I was all galleries and chambers. Out rushed the i furious haste, tumbling headlong in the chasm ad made, and rolling stones as big as themselves reach, working for dear life to repair the damage out the rain. Left them and got to the Garden of

There the edge is 300 feet up, lifted like ice in a weathered like the Needles in the Isle of Wight. red, the next white, and the contrast of colour is

extraordinary. A lot of Sunday School children out on a frolic were yelling all about. Boys climbed to the tip-top in a rift, which would be called a chimney in the Alps; they stood upright on the topmost pinnacle, and there sang and shouted. When I was younger I stood on the maintop of the *Benbow*, but "you could not do it now," as a complimentary Highlander said. An old fellow came and discoursed me pleasantly: I like these rough friendly people. Then I walked back: my pedometer marked eight miles; the glass was 80° to 90°, and the air muggy. I had no water to drink all day till I got back to the burn, and I was thirsty and tired and too late to dine. I sat me down on a log and smoked. A good-looking young fellow stopped and said, "May I beg a pipe of tobacco?" "That you shall have and welcome," said I, so we sat there and fraternized. He had been round the country gold prospecting in the south-west. He pulled out his map and described the cañon country as "the most darned infernal rough country that man ever saw. The rocks are every way up on edge, and the mountains higher than that one up there." The most curious rocks were red rocks, "like these, only darker red, with a cap of white granite on the top, many thousands of feet high." That is the right sort of man, frank and free. He has been walking ever since May with a pack team of "Jacks" (mules), and he can walk as far as a horse. He and his two mates had a tent, and slept under three blankets. The water froze in their kettles every night. They were high, very high, and in "the most darned rough country that ever was seen." They ran out of grub once. It seems the climate about latitude 37 on these Rocky Mountains is something like the climate of Russian Lapland.

lake Enare, where I slept in a tent under all the bad, and awoke to find my kettle frozen, and where I with a pack team of several Finns and a reindeer, from a basin to the head waters of the Kemi. What a union a pipe of baccy is between people who love it, and are not dyspeptic town tourists fashionably where homespun ought to be worn.

Monday, 5.—Up with the sun, fetched a pail of water, hired a buggy and drove off at ten, nine miles, to a cañon. Up it I waded and scrambled to the fall, and sketched. The "cañon" is a deep groove cut by

in granite, about a mile long. It is about 750 feet here measured by the average height of trees, with a g quadrant of my own contrivance. It may average yet deep and a mile long, and is a gun-shot wide.

is at the end of a corrie, seamed with watercourses. The basin is hollowed out of a granite hill. The delta of the river spreads from the gulley on the and overlies newer rocks disturbed by the granite on the and is all rolled. The country is subject to sudden floods. One cleared away a lot of bridges since I came. there was little rain where I was, very heavy thunder-were passing all this day, and my boy was on the look howers all the time we were in the cañon. All the rain s in the corrie gathers into the central hollow, and into the cañon. A sudden flood sweeps it into the t, and then subsides into the purling brook, up which abled. Clear water runs on coarse granite sand amidst blocks. The whole is water work like the Riukan l Vöring foss, which are cañons in Norway. The


upper corrie may have held a glacier, but I could find no boulders in the plain beyond the delta whose apex is in the cañon.

Thursday, 6.—Wandered about the springs and fraternized with the Highlanders, and drank water. This granite is all crumbling to the touch, and water makes new cañons in a few hours; all the glens are V-shaped.

My Yorkshire driver who came from Lincolnshire assured me that he had often found clams and cockle-shells about the foot hills, south about twenty miles, where he used to herd sheep, and hunt rattlesnakes. The shells were in the loose soil, not in the rocks, and were like Lincolnshire shells. I did not see the shells, and I know that cretaceous fossils weather out of rocks in this region. In the evening I made a sketch, to the music of the usual evening thunder. After the storm passed eastwards to the plains, the sun shone on the cloud and made the grandest masses of light that I ever saw. The red rocks turned dark purple. While I was working a gleam of sunlight made them glow like red-hot iron against the falling rain of the black under-surface of the rain-cloud. It swept away to the plains, and night fell cool, quiet, and clear. "Are not these grand hills?" I said to the Ross-shire man. "Huch!" said he, "there's no heather on them, and no water." "Let's liquor," said I; and we had a dram all round, and shook hands, and jabbered Gaelic.

Friday, 7.—Up before daylight. Got some grub and some pocket luncheon, and mounted a white steed composed chiefly of sharp bones, with collar marks on his neck and signs of age everywhere. Started before six on a curious saddle with

of whom some were regular hearty prairie
out a guide or any one to mind the horses, we
a "the trail." We passed the springs, and
V-gully of rotten granite sand. We got to a
ode along a knife-edge to the hill face. We
y that through large firs and great stones, and
mbling granite, chiefly pink. We got to a gap
in it, and a big stone $40 \times 15 \times 15$ feet, 9,000
granite at 165 lbs., about 1,485,000 lbs. This
arks convinced me that a glacier came down this
d not go far into the plain. It was a local
drank and watered our steeds and rode to the
use. To the right westwards we saw distant hills
park," in which Dr. Hayden has found signs of
aciation. The rocks about us were weathered
ose in Devonshire and Cornwall. I rode with
ne way up the peak to 12,000 feet above the
timber line, and then walked. My ears were
e glass stood at 85° in the air, at 63° under a
e grass. I felt weak; I had to kick my horse
h my slipping saddle all the way up. I saw a
ousand feet above me, so I gave it up. These
s from the prairies offered aid and gave it, and
want to get you along with us," but he went
g his horse's tail, and I sat and fed, and drank
water, and gazed out over the vast plain, and
ll alone, as is my chief delight on high hills.
idered slowly down, leading my old slow steed,
a bench at the half-way house and thought of
l climb and race when I was not the last. I am



not sure that I had not the best of it thinking all alone in these grand woods. A small grey ground squirrel came skipping out of the wood, jerking his tail. I sat stock still and he came to my feet, picking crumbs from the ground. I winked at him; he ran under me and my bench and I saw him no more. I suppose that he lives in the shanty, nobody else does now. He was a beautiful bright-eyed little person. I would not have harmed a hair in his active tail, and he seemed to know it; he was a Chipmunk. Lower down I met three stout men walking up, with a bag and some gear on their backs. They were country tourists, not cockney swells. They asked if I had been up; "No," said I, "I'm too dam old." Thereupon we laughed and parted. Sketching, studying stones and the wondrous landscape, putting glaciers into the hollows, and covering the plains with the sea, I led my old stager slowly down to "La fontaine qui bouille" and drank about a gallon, jawing to old rough workmen who sat round the well. "There's nothing to see on the top when you get there but stones and all God's earth under you," said an old stager to whom hard work was not play, who seemed to admire my wisdom and lack of energy in turning tail; and so ended an expedition twelve hours long, pleasantly if ignominiously.

Saturday, Aug. 8.—Sat in my cabin with all open that could let in air, writing and working. Mr. Blair was surveying for new buildings and sanitary works, none too soon. I wrote him a paper on the superficial geology of his part of "God's earth" as I saw it when looking down from Pike's Peak. Then I gave him a heather stick from Tannes cut by Ross shire amateur geologists. Walked out to the water

springs and drank. They rise close together, but vary in composition, so their sources must be deep or wide apart. They come out near the junction of granite with disturbed beds which are dated "Triassic" by the geologists. The usual thunderstorm came down and cooled the air, which was 87° in my cabin at noon. While it rained I sat under a shelter and jawed with the natives, who are chiefly natives of Europe. Dined and walked to the rocks, and smoked, and sketched, and restored my mental picture, by putting in the sea at the notch which seems to mark the old sea margin along these great hill ranges.

Sunday, 9.—A polite gentleman from St. Louis asked to see a £5 note; he a business man, and had never seen one. I had to change two gold twenty-dollar coins, having no more greenbacks. All the guests within reach clustered round the bar to look at these scarce curiosities of American art. At ten started in the morning and drove to "Colorado Springs;" there the driver took out the horses and left me alone in the street. After a time I got out, and found that the man had gone to dinner and would not drive to the station till noon. So I made another sketch of the old sea margin, and the hill with the cañon in it opposite to the house of "Yun Lee, Washer-man." The long-tailed Chinaman had got so far on his journey eastward, and there he was in his national dress washing. He damps linen for ironing by filling his mouth with water, which he blows out in spray like a grampus. A lot of sharp civil lads, of whom one was a brother artist, came and looked at my growing pencil sketch; one was leading me to find those recent shells of which I hear so much. The place was several miles away, I had ten minutes to spare; so I never

set eyes on these fossils. The train took me to Denver and back to Cheyenne.

Monday, Aug. 10.—It was curious last night to look out on the prairie over the town and listen to the absolute silence of a perfectly still night. I have heard the sound of steamers, fog-horns, trains, rail-cars, Niagara, Chicago fires, more cars and the burn at Manitou, all ringing in my ears day and night ever since July 6. The dead silence was so striking that I could not sleep. Towards dawn an engine began to howl. Thereupon several dogs of various sizes, at various distances, howled also in the very same lamentable key till the engine finished with the usual shout and snort. Then the dogs ceased with a yelp, and there was silence till the cocks began to crow in sleepy tones because it was getting near dawn. Then I slept in this quiet silent prairie town, where I was told to guard my purse from a gang of cut-throats. The quaint part of travelling here is the baggage department. At Denver a "wagon" and four, loaded high with heavy trunks, came to the platform; an active little man leaped down and tumbled the trunks right out on the ground, anyhow. Then he rolled them on their corners to a place where they stood on their ends with a large pile of their kind. The driver, who worked like the brown ants of Colorado Springs, moved about three hundred times his own weight in a few minutes, then he lightly leaped on to the express of Wells, Fargo and Co. and gaily drove away. Here the baggage master is styled the Admiral. I left my luggage with him when I branched off a week ago—now I wanted it, but could not get it, for the Admiral did not come on his quarterdeck. It was a pity. The Admiral seems to care a lot for passengers or goods.

So many people and so much weight, so many tons have to be carried and landed. That is well done, far better than it is anywhere else, but for the rest a man must take care of his box and help himself. "Have you got my baggage?" said I to a nigger who was blacking boots in the bar. "No," said the nigger. "When can I get it?" said I. "I guess you can't get it till nine," said darky, polishing solemnly while he rolled his eyes and looked comical. "Where is the man who has my checks?" "He's asleep." "Where are the checks?" said I, pining for my clothes. "Right away there in the money drawer," said my ebony friend; and there sure enough I found my checks with a paper through them desiring somebody to call me at eight. The checks and the money were in an open drawer and everybody fast asleep, except the passenger who took his checks, got his luggage, and carried it to his room, and got his hair slicked down at last. This may be a den of thieves, but it does not look like it. The rail follows the emigrant trail. On Tuesday, 11th, we passed a caravan moving west. There were three mounted men, with a herd of wild-looking cattle, three white tilted "wagons" drawn by teams of oxen, with women, children, and gear on board. They were clustered in picturesque groups about the yellow banks of a streamlet under yellow sandstone cliffs. In the hot glare of the sun they looked brown, dusty, and travel-stained. It used to cost six months to make this journey, now it is made in seven days.

Hereabouts, only twelve miles from the rail, at Fort Bridger, American troops are hemmed in by hostile Indians. We landed a party told off from some other station to relieve the besieged. There were about half a dozen in this army, so the

enemy were not strong. Hereabouts were the famous diamond fields in which diamonds, dug at the Cape of Good Hope and bought in London, were planted in the good hope of cheating somebody. A geologist sent out to examine, at once exploded the sham. The rocks contain coal, dated Miocene. There are no pebbles about the place at all like diamond gravel, but thousands of people lost heavily in "claims" sold as rich in diamonds. It seems that they don't grow well when planted. The coal is sulphury and bad. At dinner-time I looked at a great block of coal planted on the platform. It seemed to be of excellent quality ; possibly it was a genuine article, possibly it was a black diamond imported from elsewhere and planted on the flat platform by the 'cute tribe who are at war with the natives and prey on the emigrants. A carriage at Salt Lake City costs three dollars (12s. 6d.) an hour. I wonder how much it earns in a month. I incline to suspect as much as I mean to invest in coach hire and diamond claims, and Emma shares. I can't afford these luxuries. I wrote letters at Salt Lake and then walked up and down 350 feet over twelve steps of rolled gravel which mark the old lake levels. I reckon from remnants of gravel on the hillsides that these benches must be 600 feet higher than the present lake level. I sat and sketched and thought of the Caspian.

The Salt Lake, eighteen miles away to the west, gleamed like silver in the evening sun, and the whole scene was hot with yellow light. I never saw anything quite like this before ; a picture of the Huerta of Granada, with the Sierra Nevada, is most like these hills and hot plains, in my mental picture gallery. The river water pouring from the snowclad hills is fresh and excellent. There is not a trace of salt in it.

For irrigation and town uses open cuts lead the water along the hillside. All east and west streets are on the lake shelves. All the north and south streets run up and down the terraces. They are as clearly marked as the terraces at Alten, in Norway. The glass here stood at 98° in my pocket, at 75° in the coldest place I could find. Evaporation was excessive. Water-colours dried with extraordinary rapidity. I was parched with thirst close to abundance of excellent water, which I could see and hear, but could not reach without a scramble down into a trench cut by a burn in the old bench lands which are like beaches. These saints are located on the bottom of a dead sea, partially dried up. If the old Dead Sea were to dry up, it might uncover a couple of old Lake cities which were drowned for their sins.

Thursday, 13.—Drove in the street cars to the Sulphur Springs. The water is warm, and seems to come from a vein of red stuff, which looks like a vein of some decomposing sulphuret. Thence I went to the tabernacle of the saints. It has held 15,000 people, and is like the shell of a great ship resting on granite pillars, in the manner of many an old boat-house that I have seen, with a boat on top. There are many ways of getting up a subject; one favourite plan is to interview some leader, and most people who come here interview the president, Brigham Young, or one or more of his "twelve apostles." I prefer to interview followers when I want to get at the truth. "I am still an Englishman," said one; "but for my religion I would go back to the old country. Here, sir, is license, not liberty." I thought that laws affecting bigamists are the chief impediments to a general skedaddle of saints from the dry bottom of Salt Lake

and the Sulphur Springs, but I did not venture to say so. I fraternized with the Gentile photographer who made me acquainted with a very worthy Professor, who is an enthusiast and is curator of the museum. His father was schoolmaster at Warwick; he was born in Warwick Castle; he is a phrenologist, and a learned man who believed in the Book of Mormon, and came here and turned geologist and "bug collector," or naturalist, and chemist. A very intelligent man will forgive me if I name Professor Barfoot. According to him the geology of the country has not been ascertained, but these rocks are lower carboniferous. Their dip has nothing to do with the lake basin. He has failed to discover bromine or iodine in Salt Lake. He finds 1.5 by weight of chloride of sodium (common salt). He does not believe the lake to be part of an old sea, and attributes the saltiness to beds of rock-salt to the south. He has specimens very pure and compact. But where did these beds come from unless they came from an old sea? He has bones and teeth of Falconer's *Elephas Americanus* from drift. He has samples of ore from Emma, Comstock, and other famous lodes. From much talk with him and with others, I gathered that many people here knew that the Emma Mine could not possibly stand the price paid for it in England. He has malachite with gold in the green. The green mines of England have been more successfully worked by the 'cute tribes of this mining region. He has large garnets, and a few coal formation fossils. He has a live prairie dog, a little owl, and a couple of rattlesnakes, tribes who dwell together in social communities, eat, and are eaten. He has a scorpion in a seditiz-powder box, tarantulas and

dragon-fly, which preys on them so, they make a house with a hinged door, and holds it with air claws. When the enemy comes to the castle they open the door and hold on by the lock. He has Indian gear, a pipe or two which indicate the habits of modern warfare; and some tame parrots; photographs, and petrifications of wood. These he calls "Tuffa." He has deposits on wood, wood half turned to silica, the rest still combustible, and wood-opal entirely petrified. He is a learned man, and I was glad to give him a letter to the British Museum.

The Mormons, who "made the wilderness blossom like a rose" by irrigating a rich salt plain, were men of this kind. The President is very like an old prize-fighter according to his photograph. I did not want his blessing. Some who waited on him were blessed. I went away from the saintly, salt, sulphurous city of the scorching sun and parching air. The place and the people who dwell in it are wonderful, and the most wonderful things in the place are the women, who still migrate to it in crowds from Norway, Sweden, Wales, England, and other parts of the old world. They might be happier according to my ideas of human blessedness. I do not envy the owner of one-fiftieth part of one old sinner.

Thursday, 13.—From Ogden steamed along the lake shore, watching the beach-levels and the geology of the hills while I could see. Venus and Mars and the crescent moon close together shone and glittered through the pure dry air. At Corinne, as I could see no more, I went to bed.

Friday, 14.—Awoke at "Wells," in the Thousand-spring Valley near the head waters of the Humboldt. An Indian of the Shoshones, in tights and a red shirt, leaning on a fence-

pole, with a dead wild goose in his hand, was the most picturesque object visible, so I sketched him. For the rest of the day we kept on down the Humboldt valley. There was little water in the river. There is more in Glenary. It winds in a great plain of sand and sagebrush, bounded on each side by sandstone sierras. At the base is a marked water-line with a higher plain, into which water has cut, so as to make bluffs. Small side-streams have cut small cañons from the sierras through the upper plain to the lower, in which the Humboldt winds. The valley for this whole day's run is like that of the Rhine above Bingen, but without the Rhine. Right and left open great flats of the same kind, bounded by hills of the same pattern, reaching as far as the horizon, and beyond it. Great whirling pillars of yellow dust were moving slowly about this strange weird country, which seems to me a dried lake or part of an old sea-bottom. The mining regions of California, &c., begin in crystalline rocks, near extinct volcanoes. East of these are disturbed bent strata of lower carboniferous rocks. East of these are undisturbed coal-fields, dated Miocene, which end at a ridge of pink granite, against which lean both sides of an anticlinal of red sandstone, which extends southwards from near Cheyenne to Colorado Springs, on the east side of the first range of the Rocky Mountains. East of them are plains, which begin about 6,000 feet above the sea-level, and slope down to the great rivers. In these plains are undisturbed coal-fields which are disturbed in the Alleghanies. The superficial part of the geology seemed to indicate late submergence of all the plains, followed by a gradual rise of the continent, which is now North America.



INDIAN WITH A WILD GOOSE—THOUSAND SPRING VALLEY.



In order to convey my own impression of this strange and to others, I would say to a Russian, "The plains are like our plains, and the hills like small copies of the Caucasus." To a Greek I would say, "The hills are like the Greek hills." To a Crimean I would compare them to Crimean hills. To a Swiss, a Norwegian, a Scotchman, a Welshman, and an Islander, I would say, "You never saw anything at all like this country in your dreams, unless you have been dreaming about the Israelites in the dry deserts in which they wandered when they were punished for their sins."

At night we passed over the Red Desert and I was sound asleep. Into this hollow flow the Humboldt and other rivers which have very long courses and drain vast areas. They spread out in the Red Desert and return to the sky whence they fall. They evaporate, and no wonder. All my seasoned wooden articles have warped; my hammer haft has shrunk so that the head, stuck on by a famous tool maker in London, is loose. I drink gallons of water; my paints and gums dry so fast that I can hardly use them. I hardly see a cloud; it hardly ever rains in all this tract. I would not live here for all the gold in California—I should dry up and become like one of the stuffed fish in the Utah Museum.

Saturday, 15.—At one I was called by the black porter with whom I had smoked several sociable pipes to his great wonder. I rolled out, got a fresh ticket for a branch line, passed Carson, and at sunrise got to Virginia City on the Comstock ledge. Hereabouts the struggle for life is going at full swing. Everyone for himself is the rule of life; men will not answer questions or lend a hand to anybody. They do nothing but their own work. Boxes they toss about, checks

they work with marvellous accuracy ; they run rails and carry men and goods, and do business well, to earn dollars ; but any sign of decent civility I have not seen off the cars for a long time, unless I happen on a poor Paddy or a new comer, or an old stager, who wants to "stick me with a claim" or a "hunting business." All are preying on each other like tarantulas and dragon-flies ; spiders and flies. One man lost heavily in our train at "three-card monte." Gamblers and "desperadoes" commonly get into trains, act some part, pretending to be foolish miners, and trap migratory flies who are not yet "up to trap." Consequently everybody is armed and on guard, and in the humour depicted by *Punch* in a cartoon some time ago. "There's a stranger, heave half a brick at him." As we steamed into Virginia City the passengers amused themselves by firing revolvers at the telegraph posts. It was a hot fire for a mile. No wonder I had to carry my own goods.

My general impression of American travel is that a man in a Pullman car knows as much about it as a man in a Cunard steamer knows of life in the Atlantic. He may see something out of his windows, he may see a buffalo, or a whale, a gull or a goose, and think he has seen a great deal ; but if he gets out of his palace afloat or on wheels he must swim or go down. If he goes overboard in the Thames he may find somebody to pull him out. If he gets out of his lepth in the mining districts, he may sink or swim if somebody does not shove him under to rise upon him. This is pure Darwinian philosophy the struggle for life in full force amongst men of Arvan cars.

the struggle for life in full force amongst men of Arvan cars.

solidated mine and left my name for a man in authority. The same lofty, frosty, chilly mountain air of coldness, and keep your distance prevailed everywhere. I realized that I might be a Stock-jobber and went away. Every eye said plainly "*You get,*" which is Californian for the Irish "Get out of that." "*You bet,*"—you may bet safely that I did. When secretary to the Mines commission and to the Coal commission I went down enough of deep mines to know that I should see very little by the light of a miner's candle, that I should spoil my clothes, and probably hurt my shins and break my head in the dark; that I should be half suffocated in very ill ventilated "ends," and that I should have to exert myself in a temperature which here is said to be 140° at the bottom—73° in my room was more than pleasant. I went away and watched an Indian woman walking up the street with a small child strapped upright under a sunshade, in a kind of ark, slung on her back. The imp looked contented, and wagged his arms like pendulums.

The town is on the side of a steep conical hill, with a dyke weathered out of it running E.W. or thereabouts. The great Comstock ledge seems to run N.S., that is on the strike. They are down 2,000 feet, and attribute the heat in one level to the decomposition of sulphurets. If this temperature of 140° is not a shave, it is the highest mining temperature that I know. I armed myself with a hammer and a stone, and went out prospecting for knowledge. "What do you work at?" said a smith, who put iron wedges into my hammer, and did not want to be paid. "*Qu'est-ce que vous avez dans le sac? Est-ce que vous avez quelque chose à vendre?*" said a French barber who was sitting at his door

with a terrier clipped poodle fashion. Here he has been for twelve years, and he does not know anything about stones. A foreman politely took me to a new mine, and showed me the works, and a bucket of dirty water fresh drawn from the shaft which was full nearly to the brim. A Welshman discoursed me, a man recovering from Panama fever, with a pretty Irish wife and bairns, who was shovelling for pastime in a garden. We fraternized over a spirit-level which came out of the bag, and I went in and sat in the best chair. I went up to the "crop," and so far as I can make out from listening and looking and putting things together, I formed an opinion about this famous lode. Wild horses will not drag me into print with it. I will sell it if Californians will buy it. "You bet." I won't buy shares, "You get." There are The International, Gold Hill, Ophir, Virginia Consolidated, and a dozen more claims all claiming attention; and I paid no sort of attention to any of their claims. I gave the miner all the knowledge I happened to have *gratis*. I hope that he will make his fortune, for I had nothing to sell in my bag.

I gathered that mining here means getting ore enough to ballast the shares and make them sail into the market for sale. Enormous fortunes are made chiefly by selling buyers, "You bet." The 140° of temperature fell to 112°, when tested by miners. They all cracked up British Columbia as a better and richer country in all respects, and wondered why the British government does not push on the railway. I don't know and can't say. But if Comstock ledge is such a land of gold it seems odd to go further out into the cold. I did not seem to want to stop in Virginia City long, so I went away.





Washoe S-gmah

Our train was made up of waggons loaded with white quartz going to be pounded and cleared of gold with mercury, and washed. It was a lot of flat cars, with one for passengers. The line is a wonderful work; it curls and winds about the hill sides, in and out of V-shaped hollows, which show the geological structure. As I sat the engine and train curled before me like a snake, and wriggled to balance itself. Sometimes the engine disappeared round a corner, and all the way it was dangerous to look at. As emblem of place and people, I drew a boy who sat in the brake of the gold train, like a mast-headed midshipman, while another bold reckless being sat on the buffer of the engine, swinging his legs over the edge of the track in front of the wheels. That is young America going ahead in the far west. Energetic, heedless, and reckless.

At Carson City, walked about and fraternized with a fruit-seller, who was a very good fellow. Tried to draw an Indian woman, who saw what I was about and fled. Lots of Frenchmen were seated at the door of a saloon, jabbering, singing, and drinking as if they were in Normandy. French saloons and all manner of French goods and gear were on all sides. I heard Spanish, Portuguese, German, Chinese, and other lingos. Since the Tower of Babel there was no place like Carson. At night they all got gloriously drunk. When I awoke at dawn they were still singing. There was no quarrelling. One man spoke in bloodthirsty tones of "killing" somebody, but that seemed to be all talk. One rough character was seized with a generous fit, and cried: "Drinks all round." All the polyglot crowd about the hotel got up and wiped their mouths and went to the bar, and

several politely begged me to come in and "liquor." I went to the fruit-seller and feasted there.

Monday, August 17.—As I could not get into the State Mint, I went to the Capitol and was introduced to the Supreme Judge. He was very civil to a briefless barrister. I should reckon his age at thirty years less than mine. At 10, mounted the box of the stage with six in hand, and drove up a sandy road full of ruts, and crossed the track of a late flood about which I will say more afterwards. Then we drove up a steep hill, and along the most extraordinary road that I ever passed on a coach and six. Above and below were slopes of loose sand, angle 32° , in which grew magnificent pines singly, with little or no undergrowth. At 1,600 feet we crossed the watershed, and there at a saloon I discovered that a French lumberer had come from Avranches. His pals were greatly interested. We went down 450 feet and got to Lake Tahoe at 1,150 feet above Carson. The lake is 1,700 feet deep, 30×12 miles, say 360 square miles in area. It drains by way of the sink of the Humboldt, and there three rivers evaporate. Lumber carts drawn by ten mules with 5,450 feet of timber on them, made driving six in hand so queer a feat, that I gave the driver a dollar, and a well-deserved compliment. He graciously accepted both. The Four-in-Hand clubs of England would demur to such driving, but this is a great country. I crossed the lake to Tahoe City, which consists of a hotel. The clerk is English, the housemaid a very good-looking Mayo girl with grey Celtic eyes; her help is a Chinaman with a long pig-tail and all brass. The Celtic maiden is a hard mistress to Turan. The porter is a Portuguese. The stage driver is a Frenchman.



NOON IN THE FOREST, CALIFORNIA.

A German lets boats, a Norwegian fells trees in neighbouring woods. The guests come from all parts of the world. What I want to know is, admitting all these to be citizens of the United States, where are the Americans? I am equally at sea about the lake. Here are a whole lot of lakes at about 6,000 feet above the sea close to the existing snow-line. Their longest axis is on the strike N.S., or thereby. At the south end of this big lake is an inlet. At the narrow mouth it is fifty feet deep; at the deepest point, inside, it is 500, according to an old Swede who helped to sound it. The main lake is 1,645 feet deep, according to the map. The only possible exit from this very deep irregular rock basin now is at the side, down the Truckee. That river has cut down about fifty feet, leaving a gravel beach to mark the old lake level all round. I think that this is old local glacial work enormously weathered. But hot springs are near the lake, and igneous action is more marked in the folding of rocks than any glacial marks that I can find about the lake shore. I found clear marks of glaciation near the lake.

Wednesday, 19.—After a very pleasant time in this cool pleasant place, at three set off in a six-horse stage, heavily laden, and drove down the Truckee river to the city of the same name, which is chiefly remarkable for Indians and Chinese coolies. There we changed stages, and with four horses and a light load set off at a "full run," that is as hard as the horses could go. We passed Donner lake and climbed to Summit. The sun set before we got in, and the moon and stars shone with extraordinary brightness in a very dark sky. At 7,042 feet we were at the snow, and 59° and 45° felt chilly after the great heat. At Summit are

barometers, a saloon, and sundry devices for the entertainment of tourists who come up to the lakes from the Californian plains. There is a bear and a monkey. A man took to sparring with the bear; he hit round at the man and tore the shoulder of his coat with his claws. If he had boxed his ears the blow might have done worse damage. A sheet of sacking hung over a cage had on it in large letters—

A MAMMOTH RED BAT!!

CAPTURED AFTER A THREE DAYS' SIEGE

IN HELL CAÑON.

"What fellows these are to exaggerate," I thought, and raised the sacking veil. A roar of laughter from the saloon pronounced me sold. In the corner lay a red brickbat.

Friday 21.—Up at dawn. Hoar frost. The snow lies fifteen to twenty feet deep here in winter. We ran down through snow sheds, and by noon my glass was 95 in the plains of California. I got to Merced in the middle of the night, after a long delay at Lathrop.

Merced, Saturday, March 22.—With a round ticket for sixty-three dollars, got up at five and got off at six in a four-horse coach. Mr. Sleeper was the gentleman who drove. The men on board were an American, a Chinaman, and this child. A young lad, who told me a great deal that was very interesting, talked of aerolites and comets' tails, the constitution of the sun and spectrum analysis. I got my glass up to 103° under the sun, and was surprised enough at California heat to

ake a small farm. My log is full of stuff about the Yosemite Valley and the big trees, but these are now cockney places. Digger Indians had the whole place to themselves; now they fish there and pound acorns, but all the world and his wife go there. My landlord was a German, his wife, Miss Dobba, from Renfrew; MacAulay from the north of Ireland was next door; Perigord, a Frenchman, has fed 1,000 travellers this year at his house on the top, which has become Parrigorie's, by the confusion of tongues. O'Hara is the guide at Clarke's, and Mrs. Clark says she is a Spanish floor.

Returning from the big trees O'Hara rode away from me. Hauntering quietly after him, Parson, my steed, stopped and started and stared. I stared and saw nothing but a lot of calves and sheep scampering in a meadow. We went on the trail, Parson on tiptoe, or on that part of his hoof which contains his toes; he kept his ears erect, stopped, and started, and walked slowly on. We came to a bough which looked like a snake. Parson started, and I looked for rattlesnakes. Some mouse or cricket rustled. We both started. At last Parson stopped all four legs at once with a strange jerk and came to a dead point. Then I spied two squaws going down the track before us. I could hardly get the horse to go near them; they looked as scared as deer at me. Each carried a black puppy in her arms and a big basket. They were barefooted and walked in the dust. With their black hair and wild faces they seemed in keeping with the big trees of Mariposa, and why my steed Parson was so scared by them remains to be explained. Are Indians a different kind of men, abhorred of horses?

Sunday 30.—Drove to Mariposa, and there fraternise with a farmer from Donegal. He mined once, and he told me a great deal. Buffalo Jim, the driver, mined for many years, and never was so happy, cooking pork and slapjack, smoking with friends at night, working all day; no one to interfere with him; independent, and free as air. A German passenger was a sailor and did the same. Now he has a "regiment" of children and a Ranche. Every man I meet has been a miner and is something else. The gold bait brought them all this way; now they stay to work the country, and those who have the best brains go to the front. We got down to the plains in time. The ground next the plain is worn by streams into round bumps that look like ridges and furrows in the low sun. There abide in company owls, ground squirrels, and snakes. There pasture great "bands" of sheep, herded by Mexicans and others, who ride furiously in clouds of dust.

On holidays they come to "bars," and billiard "saloons," in shanties, and drink drinks of bad water with the farmers. At "Indian Gulch," which used to be "quite a mining camp," I found a whole lot, and discoursed with them in Spanish. Then we broke out into the plains. The sun set, and the shadow of the world crept up the sky, and overhead, and down the west, and closed the eye of day. Stars shone out more brilliantly than ever I saw them shine. The Milky Way was a cloud of light amongst them. And so we trotted and bumped on to Merced, and made seventy-five miles with one change.

At dinner we found a lot of "Odd-fellows" giving a parting entertainment to some young men who are emigrating to Mexico. They made speeches. They sang "Landlord fill the flowing bowl," and they were glorious on champagne

brewed in this marvellous State. Fine, tall, hearty fellows they were, well-dressed, thriving men, a credit to their several native lands and to their adopted country. But to me, who can remember the birth of this State, and thought of coming to the christening in 1848, there was something strange and incongruous in this sentiment addressed to Californian "emigrants:"—"May they always act up to the principles of their State wherever they go, so that men may say of them, 'They are good men. They are Californians.'"

The young men were not able to get on their legs, so one returned suitable thanks sitting.

Monday, August 31.—Stayed in excellent quarters all day, and wrote log and letters.

Tuesday, September 1.—Got to San Francisco, delivered my checks and got my luggage; got my letters and wrote home.

No. X.

SAN FRANCISCO,
Wednesday, September 2nd, 1874.

MY DEAR MOTHER,

My last was from Salt Lake. I got in here yesterday, and found quite a pile of letters. From Salt Lake I went to Virginia City to look at the great Comstock vein where much mining is done. Thence to Carson City, noted for bugs. A man who was much bitten by them everywhere, went to the hotel there and registered his name in the big book at the bar as is the custom. A bug crawled over the page. "Well," said the man, "I never saw them come to see where I was to sleep before." None of them found me out and I slept sound.

I went over a mountain 1400 feet high in a stage, and six passing great carts loaded with wood, where there was hard-

room. The carts had teams of ten mules, with a wild man riding one of two shaft horses. The whole land is granite dust, in which grow giant trees 180 to 200 feet high, with no under-brush to speak of. How you would have pinched your neighbour if you had sat on the box, and looked down the sand slopes and rocks! I held on by the iron rails with might and main. Then we got to Lake Tahoe, and steamed over it in a steam-launch puffing. Then I stopped and sketched for a couple of days. I set off in another stage over a worse road and got to Summit. There I joined the rail again, and spent a day 8000 feet above the sea sketching and geologizing. Then I set off again and ran to Merced. Thence I staged for two days over fearful roads, into the Yosemite Valley, where I stayed four days, sketching and riding about in a great gorge of granite with vast trees growing in more granite dust. The place is full of rattlesnakes, but I saw none. It is famed for waterfalls, but I saw the only shower which has fallen there since last April, and I had to look for the falls with an opera glass. The feature of this place is dust. Then I rode right up a cliff on a practicable talus and over a granite hill down to "Clerk's," and on Saturday I went to the big trees and sketched there. I have got a stick for the Doctor, and I have sent seeds to those of the family who have ground to plant them in. On Sunday I staged 75 miles in a cloud of dust. On Monday I stopped at Merced and made up log and wrote, and rested. On Tuesday I came here and got my letters. I shall get out of this as soon as I can. I have no adventures to relate and nothing to tell. The people seem to be the wild spirits of the West who came here from all the world to dig gold. They

; till every river course was washed clean, and then they
 k to mining in quartz veins, sheep-farming in the plains,
 wing wheat, and other industries of the ordinary kind.
 w white men are washing gold. The Chinese are at it still
 l make wages by hard labour. The geology of the matter is
 a. The Sierra Nevada, where I have seen it, is a great out-
 -st of Granite, Syenite and other such rocks; on each side
 atified rocks are on edge striking north and south or thereby.
 these rocks on both sides are Quartz veins which generally .
 t N.S. or thereby; with cross courses running all ways. In
 se veins are metals—Gold, Silver, Galena, Copper, Mercury,
 &c. These as a rule are rich near the surface, poor low
 wn, so deep mining generally has not paid. All the hills
 deeply furrowed by rains. The streams have washed the
 oris, and the gold being heaviest has stopped in the bottom
 the watercourses.

Nature having done so much, men have carried on the
 cess by washing the débris in the bottom. There is no
 d, or none has been got above the Granite line. It is all got
 : of the watercourses which pass the outcrop of the veins.
 e best of them are nearest to the Granite range. The
 ins are all granite dust, and débris of rocks altered by heat,
 shed down and sorted by water and now as dry as a bone
 d alkaline. They get water by sinking deep wells. This
 ay not interest you, but it does me, and may others, and it
 ll do for my log.

This Occidental hotel is a Noah's ark full of people from
 australia and the rest of the world on the path to everywhere,
 d a bore. I shall get out of it soon. And now good-bye
 r a while.

J. F. C.

No. XI.

MERCED, CALIFORNIA,

August 31, 1874.

MY BELOVED A. E.,

Since A. would not come travelling with me this way, and you went East to Gamle Norge, I must send you both a line and a present from the West. With pains and steam I got over the Atlantic, and up over one side of America and down the other, as my letters to your Grandmother and others more fully explain in detail, and my log will tell at large. Having some coin left I went off in a stage driving from this place to see the Yosemite. It is rather like your Norwegian Romsdal, but the hills are not so high, and the forms here are not so quaint. The glen is not so long, and there is less water in it and generally it is smaller fish. This Yosemite, or Great Grisly Bear, is not up to the Norwegian mark as a valley, but it beats all creation for trees. I measured them 198 and 200 feet high, with stems eighteen and nineteen feet round. These are the common sort of pine trees which clothe the Californian hills, and the higher I went the bigger the trees seemed to grow in shelter. So far, Norway may help you to realise the Sierra Nevada, but the driving! My wigs and old bones, that's something new. A man drives five from the box on a road as wide as his three leaders, and full of stones; up you go through the forest, and when the top of a hill is reached down you go full tilt, round corners, in and out, bump; with an angle of 32° , and rocks and trees on one side or the other, or on both above and below the road. At last you get to the edge of a cliff, and over you go down a road of the steepest practicable

gradient with cliffs on each side above and below, and no fence, and very sharp angular stones at the bottom. The Gemmi pass in Switzerland is a road of this kind, and there men prefer walking. The worst road that I ever drove a carriage on in Norway is less dangerous, and here a nigger drove five-in-hand rapidly and frightened me horribly for two days. The Yosemite reminded me of Sindbad the sailor's Valley of Diamonds. I looked for them and for gold and found nothing but sand, dust, and granite, and mica glittering in a hot sun. The snakes had nothing to guard but their own rattles. I found a lot of Digger Indians going about their avocations. I met one with a fishing-rod cut out of the forest, and a string of trouts, 'ticed out of the burn with green grasshoppers. I saw their camps and bath-houses, and recognised the ways of my friends the Lapps and Finns. I saw the women one morning pounding acorns with a long stone in rock cups made on the top of a flat granite block by frequent blows and much pounding of acorns there, to make meal and cakes. Another day I saw them cracking acorns for future pounding with great dexterity and a round pebble. They are curious creatures, and I was sorry not to get their ugly mugs drawn. I rode up and down the valley, which is as flat as Romsdal, and out of it up a wall as steep as the Troll Tinderne, up by some fallen rocks and talus heaps on a well-made horse track, which led me to "Glacier point." If ever you get to "Martin Luther" or the "Bridal procession," and stand on the edge and look down, you will get a good notion of my bird's-eye view. The Fjeld seen from Jerkin is somewhat like the rolling plateau of the Sierra Nevada as I saw it when I got out of this glen of the burn.

But the Norwegian fjeld is a garden to this well-drained roasted granite desert. I went on to the big Mariposa grove, the Aristos of the forest, and King of trees. One was ninety-four feet round and 234 to the broken top; another was seventy-five round and 105 to the first limb. Some were 300 feet high, that is to say, as long as the front of your father's house, and a good deal wider than the gate. I rode through one trunk. Thirty feet diameter would let a railway train pass a tunnel. I send you a parcel of seeds; nurse them, and try to live six thousand years to see them full grown "big trees," and all that time believe in the affection of your wandering relative. Give my love to your mother, and tell your father that when I saw trout in the Yosemite I wished them salmon, and I ate them in Norway. That's so. *Farewell*,
min Smoka Piga.

J. F. G.

NO. XII. MERCED, CALIFORNIA, *August 31st, 1874, and*
 SAN FRANCISCO, *September 2nd, 1874.*

MY DEAR K.,

To-morrow or next day I shall look for letters at San Francisco. Meantime, I send you a pickle seeds of the "Sequoia Gigantea" otherwise "Washingtonia," *vice* "Wellingtonia" translated by Patriotic Yankees. I was in the "Mariposa Grove" on Saturday; one tree broken at the top where the trunk is thick, and with caverns burned out of the sides, still is 234 feet high, and ninety-four round the trunk at three feet from the ground. Another which I measured is seventy-five feet round, and 105 to the first branch. I believe





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it to be near three hundred feet high, and it is an average sample of some four or five hundred of the sort in this grove. The tree is very shapely, with emerald-green foliage; light red, and Indian yellow, and burnt sienna, were the colours used to imitate the brilliant colour of the bark, when the sun shone upon the straight thick trunk of this magnificent vegetable. High up, the best of them branch like some Scotch firs that I have seen, but the general shape of these big trees suggested the trees of my youth, which grew in my Noah's Ark. Of course you know that they are reckoned to be six thousand years old. The mischief here is, that other little trees two hundred feet high or more, sugar-pines, cedars, and such like, grow so thickly about the big trees that it is hard to see or measure them from a distance. You cannot see the trees for the forest. I made my measures with a small optical square, which H. gave me; and measured the base with a string, by the help of O'Hara the Irish guide. I thought he never was going to stop; he ran out line like a salmon, and looked like a fly when he got to the root of the tree. A great many big tree groves have been found of late, and they range from near the Pacific Railway down into Mexico. So far as I can find out, all groups grow on granite, on the Sierra Nevada, at six to seven thousand feet above the sea, in deep sheltered gulches, and near some spring or streamlet of snow-water, which keeps the whole place damp. In the general dust and dryness of this high rainless drained mountain land of cañons these trees seem to need shelter from storms of wind and moisture. The soil is wet granite dust, and the débris of trees "as old as the hills." Deep sheltered west highland glens, like those which we know in Ross-shire

and in Argyllshire, seem most like the ground on which I found these trees growing. Try your luck with the cones. I could hardly find a cone anywhere. Three thousand "trotters" and the residenters have gathered them this year. I could not find a single young tree. I was told that the English Lord, who was a "bug collector" employed by the Queen of England, had carried off two or three seed cones. I could not identify this aristocratic naturalist, and so I thought that he was, like you, a gentleman botanist. I got the cones from a carpenter yesterday at Clerk's, from whom I also got a couple of sticks for the doctor—"The wanderer" which I gave me, and made me a vagrant, and a collector of sticks.

Each bunch of leaves turns upwards at the end. The leaf is made like an ear of corn, with a bent point at the end of each section of the leaf, which answers to an ear of wheat. It looks like a green plaited fishing net. The bark of the twigs is like the shape of the leaf, but brown, with the scales on the bark more closely packed about the wood. The bark on the stems varies in different specimens. Some look smooth, and these have piles of shreds of shed bark below them. Others have an outer plates of bark outside, like "Cedars." They all bear cones a couple of inches long. "Cedars" do not, and their leaves are more palmated and quite different. Sugar cones are long and enormous. I do not remember to have seen this big tree leaf on trees in England which purpose to be young specimens. The wood is white outside, and very light within, and very light. It works short, and is brittle. It is said to last a long time. The fallen logs are sound, and do not rot slowly. From these fallen giants chunks are cut

ics for tourists. The trees belong to the State. The bark is many feet thick, and out of that they carve signs. The seed sells at twelve dollars a pound. As worthy of big trees, I send you a couple of photographs. Watkins of San Francisco, who is one of the best in this line that I know. I send you the measure of a tree. It grows at a spring where tourists lunch, and use themselves by throwing emptied bottles into a hole in the trunk. There is a very large pile of broken bottles here now, some twenty feet up.

San Francisco.—Yesterday I travelled about a hundred miles and in, from here to the top of Mount Diablo. I came from the station, about twenty-two miles, in a stage and got to the top, 4,000 feet, in a thunder-cloud. I, unused to thunder, insisted on stopping on the mountain point. I made him drive down about a hundred miles not liking to be a conductor. We stopped in a thicket of sharp and prickly oaks. I, unused to Poison-oaks, began to scratch. The driver, who had practical knowledge, warned me that I might easily poison myself if I got near these trees. Many Californians suffer greatly from Poison-oaks accordingly. Between us we escaped the stings. There's nothing like experience to teach fools. I could see nothing of the view for a low electrical haze had filled the air. There were some loud peals of thunder over the city, and people were so unused to such storms that children screamed in the schools, and there has been a talk. Some imagined that the end of the world had come. They don't expect another shower for the next three

At noon my glass was at 90° in the shade near the

hill-top, at about 4,000 feet above the sea. At sundown came the usual sea-breeze and sea-fog, which come regularly. My glass then marked 60°, and the air felt raw and cool. The piles of wheat sacks and the hills of straw that I saw on this trip, all out in the open fields, would have made your farmer's mouth water and gape for envy and wonder. One man has been threshing with steam for five weeks, and coining gold faster than miners. This is a wonderful country, but the dust is fearful. The ground squirrels are as numerous, large, and hungry as rabbits. You asked me to look for investments. If any of your people invest here in land, they will have to pay for it. Some farm labourers earn four dollars a day, about 16s. 8d., as I am told. They sleep out anywhere, and eat all that they choose while harvesting; but they have to pay in proportion for clothes and shoes and sic like. Nobody cares for anybody. A man is a hand, not a brother.

Fruit, grapes, peaches, pears, plums, and all manner of things that you grow painfully, grow here in marvellous abundance. I saw an old Irishman at the street-corner in caubeen and frieze, with unbuttoned knees and a dudeen, selling his own grapes grown in his own garden. His stall, at Covent Garden, would have been worth about ten pounds, I reckon. He was asking our price for street apples. I was raised about a famous Scotch garden, but I never ate better fruit. I therefore suspect that the big trees will not thrive very well in wet Scotland. But try your luck. A friendly fellow-traveller told me the other day that I ought to go somewhere to look at a newly-found group. "There was one and two notes" he said. "and we found a fallen tree with sixteen men abeast and

rode out at a knot-hole. Yes, sir, that's so, you bet." I smoked and remembered the mammoth red bat at Summit. If you send people here tell them to "keep their eyes skinned," for all is not gold that glitters, even about the golden gate of this golden State. It is a big thing in farms, I reckon, but not quite so big as the stories told about it to catch flats.

The hollows in the big trees result from the Indian practice of burning undergrowth to get at the game. Most of these very old trees have great caverns burned in their sides. In some the fire has smouldered up a trunk so that it stands hollow, like a chimney. Of these chimneys some have fallen. I rode through one at Mariposa. I had to stoop low and I blacked my widewake, but I rode through a fallen tree. I was told that a man might hold up his rifle at arm's length and ride through another, somewhere. I rode from side to side under burned arches in one standing tree. There was stable room there for many steeds. A radius of 15 feet 1 inch describes a circle of 94 feet 6 inches, which fits the string which measured the "Grisly Giant." The area of a circle 30 feet 2 inches in diameter is 714.74 feet. Allowing two square feet for a man to stand on, three hundred and fifty-seven stump orators might stand on the remnants of that stump if the tree were sawn over at three feet from the ground. Cut out a circle on your lawn, plant the seeds in it, and may you live to see trees grow as big as those which I saw and sketched and measured at Mariposa.

J. F. C., Bug-collector.

P.S.—*September* 15, 1874.—Seeds sent home in letters are growing now in Gloucestershire, in Walmer, in Cheshire, in

Ross-shire, at Windsor, and elsewhere. They lay dormant for a long time, and are now about twelve inches up. My carpenter was a true man.

No. XIII.

SAN FRANCISCO,
September 2nd, 1874.

MY DEAR V.,

My intending emigrant cousin's headquarters are seventy-five hours off in another State, and he may be days off in the mountains of Oregon hunting. My chance of meeting him is small. I have been going ever since Boston, but I have been wandering up and down, geologizing, and sketching, and enjoying myself alone. I never had so pleasant a comrade as myself. He never is in a hurry, and he stops when I want to sketch as long as I like. It's all a mistake taking travelling companions, unless they love, honour, and obey, as your companion does, I hope. You write of balls. There was one in Yosemite Valley while I was there. I did not go, but the dancers were several very plain-headed, middle-aged, hard-working American matrons, some Spanish half-breed washerwomen, and, I believe, "Mary Anne the Indian squaw." They are all perfectly hideous, for I saw them at different times riding mules and kicking up their heels in short snatches of Fandango about their doors in the valley. I believe there were some Chinese men, and some few belated and benighted Yankee tourists, of whom two reported to me the next day. Ball indeed! my dance was with big trees and rattlesnakes, and tarantulas, and granite cliffs, and "Abraham" and "Moses," who are mules. The last of these gave me a pretty dance, his back was like a very springy bow

on which I and a Spanish saddle sprang up and down, till I thought I was going up a big tree. He would not walk over bridges which he smelt dangerous, so he jumped and he bucked over logs, and generally he made me dance for a dozen miles till my back ached.

You talk of heat! my glass begins in the morning with 50° or thereabouts, and rises to 85°, 95° and 103°, while I sit in clouds of dust. I drink gallons of water, iced when I can get it, and so I evaporate till I am as graceful as a grasshopper. I am sure I must be two stone lighter since I started, and I feel quite active and juvenile, and ready to dance if I could only find some better partner than Moses the mule. You talk of Buxton. Bah! at Colorado, the springs at the foot of the Rocky Mountains, at the edge of plains which begin at 6,000 feet above the sea, at the foot of Pike's Peak, which is 14,000 feet high, I drank "La fontaine qui bouille." It is 60° and better than seltzer water. When I came down from Pike's Peak I got off my horse and sat on the edge, and dipped and drank from my indiarubber cup till I hought shame. Then I stopped and began again. I was so dry from evaporation in 85°, at 1,200 feet above the sea, that I mopped up the water like a sponge. Heat forsooth! Buxton indeed! dry up and don't talk to me about these kind of old-country matters. If you write to my fair cousin, wish her all the joy she deserves. They had better not come here to ractise. "Scotchmen when they come this side o' the mountains, think there's nae God Almighty to look after them, but here is," said a venerable party in spectacles to me yesterday morning. He was going out to shoot field rabbits and cotton tails, and ground squirrels in the plains with a lot of

rancheros. They were going to look after sheep, and they all meant to sleep on the ground, with the sky for a roof and a blanket for bed and cover. And no hardship is that in this dry land. My friend was a schoolmaster.

On Monday I got into a breeze to cool off, and sat smoking and glowering at the sky at Merced. The stars did not look like brass-headed nails stuck into a blue velvet vault as they do at home. They seemed to float in purple light with a great cloudy arch of yellow light beyond them, which is the "Milky Way" of our dim Heaven. A German from Holstein came to "cool off" beside me and leaned his back against the same post, and spoke English with a Yankee twang, and Californian philosophy. "What is your opinion of the cause of this dry climate?" said he; "some people here say that's all Divine Providence, but I'm not one of that superstitious sort." And then he went off on science, such as he knew, and showed intelligence, but he had never noticed that which I showed him, the sequence of sunset colours on the west, and the shadow of the world creeping up the sky from the east. First a low bank of purple rose above the hills, then a great black arch was overhead, with stars glittering on it, and then a low arch of violet, fringed with blue, green, and yellow, and orange, shut down upon the western horizon where the sun had gone down blazing half an hour earlier, then it was night. There are very few of "the superstitious sort" in this land, and it is not good for spliced parsons. Missionaries in single harness would find a grand field. A German had been to a camp meeting; he said that he had so much Holy Spirit in him that he could not stagger home to "Mission" he met so many true believers preaching who

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EL CAPITAN. A BIG ROCK. YOSEMITE

had Lager beer and whisky, that he was "drunk," and the preachers was as "pad," said my German who had been a Hamburg sailor before he came here to mine in 1849. Now in 1848 or 1849, I thought of coming here to mine, and dreamed a dream in my bunk in Hanover Street, Hanover Square, and when I awoke my dream was so vivid that I made a picture of California as I saw it in my dream, and that you will find in a big book of old drawings which I left at home. Last week in 1874, about twenty-five years after drawing my dream, I made a sketch of El Capitan in the Yosemite Valley, and if ever my books and you and I get together I will show you that dream and reality agree wonderfully. Perhaps somebody described the reality before I dreamed. I am not one of the superstitious kind who believe in dreams, or in second sight, or in the evil eye which makes Italians point at me, but there are the drawings twenty-four years apart or twenty-five, and they may be compared. And now let your mother have the benefit of this rambling screed, and tell people where I am, and what I am doing.

I must go seek coin, for I am reduced to my last American gold, five dollars. Then I must make up my mind where to go next.

Accept the blessing of this wanderer. "Sir," said a man to me; "air you travelling for business or for pleasure?" "Sir," said I, "I am travelling circumperambulatorically." "That will do," said the Yank, "you bet."

Give everybody my love. I am going out to gamble.

N.B.—I tear up home letters, so take the hint and write scandal.

No. XIV.

"AJAX," Sunday, September 6th, 1874.

MY DEAR MOTHER,

I wrote and posted a line to K. yesterday, and I started in this ship for Portland (642 miles) at noon. I went to the office to take my ticket on Friday. A man came in and said that he could not go, so they might let his berth. "Is it a good one?" said I. "Well," said the clerk, "I reckon that it is the best that was to be had here four days ago." I took it. It is less than a foot high, and scarce a foot wide, and there is a knee over it which makes it impracticable. So I went down below to the eating room, with two pillows and a blanket, and slept in my clothes on a narrow bench. I forgot in my dreams, turned and fell on the deck, "bump." A nice little nigger girl tapped me on the shoulder and asked me for a match. "Our babies is sick," she said, "and the lamp has gone out." I had no matches that would light the lamp. "They are twins; and they have been travelling all around quite well; now they are sick," &c., &c.; then I fell asleep, and the little nigger went prattling to the Stewardess, or some one else. The twins and the lamp were choking; I, in the open saloon, had a parched mouth and strangling. When they opened a skylight somewhere, the fresh air came showering down my throat, and the babies ceased to squall—what fools people are about air! I rose at six, went aft, rigged my bath and pumped salt water into it, and I am as fresh as paint. The freedom and business of the voyage is something

delicious. I open my box to write, the whole crowd stand round and look at me; a man is now reading over my shoulder, as I write; another is looking at the other side of my paper, and staring at my pen. Five are trying to read my letter, but now they are gone to seats. I suppose that they have read this passage which was written to drive them away.

No. XV.

OREGON, PORTLAND,
September 12th, 1874.

So far had I got with my *Ajix* letter, when a horrid little Yankee boy came and pulled my pens about and bothered me, so that I had to pack up and quit. I have never been quiet enough to write since.

My fellow-passengers turned out to be chiefly German Jews, who are freemasons and odd fellows, and good fellows. I fraternized greatly with one of the tribe of Aaron, as he told me. They seemed prosperous and pleased to be treated with decent civility on equal terms. Ben Aaron is a clothier in this city. We were near 200 on board, and a baby was born in the steerage. Lots of other passengers in the shape of birds came on board by the way. One was a little ground dove with two long feathers in his tail. He was very tired and hungry, and went paddling about the deck, picking up grains of soot. I got him some bread, but he scorned that and picked soot. I presumed that he fed on black seeds on shore, and did not know the use of white bread—savage bird. The half-civilized Yankee boy ran after him. I could have kicked the little brute with pleasure, but I

tamed him a little by kindness before we landed. On Monday, 7th, we saw the coast range all day. At sunset, near Cape Foul Weather; the clouds were magnificent. Then the Captain concluded that he could not get over the Columbia bar, so he went slow all night, and we rolled fearfully. On Tuesday, 8th, we waltzed about a buoy for some hours, rolling, while the tide rose slowly and the rollers broke on the bar. At last we went at it, and through the passage and got in with eighteen feet water. Then we stopped at Astoria, and ran up the Columbia, through a flat alluvial plain with beds of Basalt everywhere for rocks.

I got to bed here at midnight, in the St. Charles Hotel, and found the boxes of my vagrant cousin in the bar. He is somewhere between this place and San Francisco, coming up.

Wednesday I spent here, cleaning up and recruiting. On Thursday I went 100 miles up to the Cascades and the Dalles—on Friday, I came back again, and here I am on Saturday writing up log.

This seems to be a kind of earthly paradise waiting to be peopled. Next the sea is forest land and the coast range. Then comes a wide flat valley full of trees and towns, and railways, and rivers, and river-boats, and a stage line to California. There are forty-eight hours of stage-coach in the overland route. This valley, about fifty to sixty miles wide, is bounded by the Cascade range, which runs parallel to the coast, and is continued in the Californian Sierra Nevada. It seems to be part of that great volcanic American range which begins north, about the Chinese Islands, and

reaches Tierra del Fuego. All that I have seen of it indicates tremendous geological disturbance and contortion of old rocks. In their breaks are Quartz veins, and Gold, and Ore. Their débris make the Placer washings and diggings, and these brought men from all parts of the world. In California it seems hardly to rain at all. The whole land is yellow dust. But directly we got out to sea we got into mist and fog. Here, between the coast range and Cascade mountains, it rains "thirteen months in the year." Consequently in this warm latitude trees grow to 300 feet high, and they grow in a rank luxuriant carpet of ferns, and shrubbery, and greenery of all sorts. The sky is cloudy and the landscape blue. But beyond the second range the land is as dusty as California, and bare as the plains, and sunny. There grow fruits and flowers, grapes and peaches, and luxuriant crops. There, near the third range, they wash gold and find veins of ore, and mine. Some years ago there was quite a gold fever, and the wanderers of the earth wandered to Eastern Oregon, over the plains and mountains north of Salt Lake and the railway. They came for gold, and stayed to work. I met on the river-boat a Norwegian from Romsdal, who knew all about B. and A. He is employed in fishing, with a whole colony from Norway. Another was from Christiania. They both spoke English, and agreed that their countrymen were great brutes, who get drunk, and fight and get into the State Prison. Next the steward saw Kensington on my luggage label, and turned out to be a Kensington Londoner who had been waiter at the Divan tavern in the Strand. There I came to dine in 1849 when I thought of coming here to dig ins

of turning barrister. I am not sure that I might not have made a fortune in this land. Many who used their brains have grown enormously rich though they began as labourers. I am too old to begin now, but I might succeed if I tried. B. may do it if he tries. Nothing can equal the beauty of the country. I only found it out yesterday when the glass rose half an inch and the clouds opened. Then, towering above the Cascade range, which is green and rounded, came out Mount Hood. It is between 11,000 and 12,000 feet high, a volcanic cone as perfect in shape as one of my finished models, and now it is covered with new snow from peak to base. When I suddenly spied it over the trees from the Columbia, glittering in the morning sun, with light on one side and clouds on the other, I was quite startled. I had no warning of its presence; it was hidden by clouds as I went up, and now it appeared when I least expected to see a mountain. I thought it the grandest hill that I ever saw—a perfect Etna. Another of the class is visible 100 miles south. Another, Mount Shasta, is near the boundary of California, and a whole cluster of them can be seen from here northwards towards Puget Sound. I must see more of them. These old volcanoes account for the enormous sheets of Basalt which make this land, and which extend half way to the backbone of America. It was amongst the "lava beds," east of Mount Shasta, that the Modoc war went on. These volcanic rocks are on the scale of Iceland over a tract far wider, and along a line that reaches from North to South America as I begin to understand. At Cascade sheets of Basalt rise one over the other for 3,000 to 4,000 feet. Yesterday I got a boat and found at the river level a bed of yellow

stone, or possibly ash, full of petrified trees. These grew when these hills were made, and they welled up from some point out of which rose Mount Hood, and the rest of the volcanic giants of this region. Amongst these sheets of Basalt we find at various levels old surfaces with fossils in them, bones, tusks, trees, shells, and every sort of surface thing that might now be buried if the volcanoes took to spouting as they have done over and over again. "Leaf beds" abound. I have no time to hunt fossils, and I can find no geologist to tell me what has been found. I can but see the recent geology of this great country, and, seeing it, wonder at the vast scale of it all. As for glacial marks there are none. Possibly there may be some buried 3,000 or 4,000 feet deep, but if there be I have seen none; I saw great trees and bones of tropical creatures buried under the Basalt. Everywhere I see the work of streams. Where rain falls abundantly, the main waterways have sides furrowed by deep ditches and gulches, whose sides are furrowed in like manner. Where rain does not fall the main waterways run in dry cañons." There are steep-sided ditches with falls in them where the water is digging back as it digs at Niagara, as it has done since I was there ten years ago. Because there are no feeders, there are few side gulches in these cañons. But those who travel over the country find rough work. They must drive over waterless plateaux from one deep ditch to another, which they must cross to reach the next plateau or mountain. In short, this is Caucasian Daghistan on a larger scale, over which these diggers travelled for months to reach gold, and having reached it took to farming, and garden-coach-driving and gambling, because they could not get

back. *Vestigia nulla retrorsum* means go ahead. My landlord was bred a priest and came here from Dijon in 1849. He is a most agreeable old man. His runner is a Piedmontese, his waiters Irish, his housemaid is a darky with white blood, her help is a Chinaman, with a long black tail, in full costume. He means to go back dead or alive, and the contract is made and signed. A cattle driver was from Staffordshire, another is a Kentish man. I saw Spaniards and Mexicans, and Portuguese lately. In short, here is an epitome of the world. Jews, Christians, and Infidels, Heathens, and Africans, and Indians, Caucasians, Aryans, Peruvians, Americans, and all other races gathered here like vultures about a sturgeon, to feast on gold. "Americans" are the rarest class in this part of America. That's a fact, but a gold fever generally breaks out in the east where men are more civilized, buy land and need hands. As for the live stock of the forest and flood, I find that millions of salmon from 60 lbs. downwards are caught and cured, and fetch about a shilling a head (two bits). The curers made 75,000 dollars at one station one year. They wanted hands to work their nets. There are forty stations for fishing down the river. Nobody tries to catch salmon with the rod. If I had my rod I would try at the first rapids 100 miles from the sea. Besides salmon, the river swarms with sturgeon which are wasted. These run from *twelve hundred* pounds downwards. There is an epidemic amongst them, and I saw many very large fish floating dead and stranded. At one were five hogs and six or seven ravens; at another six eagles; at another a lot of birds which were told to call Turkey buzzards. All manner of river fish are seen, and many of them which run from the snows of



Mount Hood, &c., are full of beautiful silver trout which bite all winter." The Indians catch them, and the settlers eat them. I cannot persuade myself that the salmon will not bite" also when somebody tries. Meantime they catch fish, or gold, not for sport, and they will soon spoil their property. Nobody cares for posterity. The forests are full of game, elk, bear, deer, beaver. The farmers drained the beaver dams. The beaver filled the drains, but the farmers slew the beavers and grow crops on the vegetable mould of centuries, which nothing will wear out. They speculate in beaver dams. Fly-fishing game abounds: I fled and would not settle on the beaver lands. I cannot fancy a pleasanter place for a hermit of sporting tastes than the rapids of Columbia. A man yesterday, who lives there, praised his place so highly that I smelt wish to sell out and migrate. I did not bid, but if I were thirty years younger I might. Mount Hood in sight on one side, Mount St. Helen's on the other, as I was told, both looking through snow, and casting up chunks of rocks as big as your head. An orchard bearing the finest fruit in the world, the finest trees, the finest water, the best trout, the purest river, and all these wild beasts, birds and fishes to hunt, and slay, and catch; gold under the sunflowers waiting for me, sunshine on one side, rain on the other, and perfection in the middle. What more on earth could a man desire? But why did this Adam want to sell out of Paradise? Now he must go feed and wander about the town. Let the family see this, and send it to the chief. He will be amused by the *leaf-beds* at all events. Good-bye.

J. F. C.

Log.—Columbia River Bar.—At 7.30 A.M., air 57°, water 58°, mist fog and showers flying about in a regular purple indigo, Scotch sky. After dodging about outside in a heavy sea, rolling and breaking on the sand-bar, as it used to break on Laggan Sands, in we went. Each white sea horseman, with his curved plume of spray blown backwards, rolled in before us to break. We funked, and turned round a buoy for the third time. At 7.45 we turned in again towards low hills, with puffs of mist like smoking fires curling amongst the trees. A bright line of spray and sunlight was on the bar. Cormorants and gulls, cranes and eagles, flitted about, hoping to eat us. We funked, and revolved once more about our pivot, the jolly sand-buoy. At 8 we went in, followed by a schooner which was pursued by a tug, hoping for prey of 200 dollars, which is the fare. We turned and twisted, and wriggled and rolled horribly, and got in safe, though we drew eighteen feet. The schooner followed, and the tug, having no fear of shoals, rushed madly away through the breakers, and went out to sea, followed by the gulls and eagles. This bad bar-harbour is the best between the Golden Gate and Victoria. It is but a postern-door; but through it vast stores of grain find or force a way down the Columbia on the way round Cape Horn to Liverpool. The bar is always shifting, and the channel is worse than the dreaded banks of the Mersey. The secretary to the Light House Commission saw nothing that he thought worthy of introduction "to Hum."

Loc. —Portland.—The marvellous change here to the eye is that instead of white granite the trees grow in rainbow and

clouds, and purple shadows and brilliant gleams of light and passing showers, make colours on the rank vegetation. In California everything is yellow in yellow sunlight, except the dark trees, which look black. Mountain forms here, are more varied. Basalt abounds in beds in cliffs by the river, and Saddle-mountain and other high points look igneous. The whole reminds me of Norway, near Christiania, in fine weather. I saw none but igneous rocks, and nothing glacial, not a boulder. The laundry is run by a Swede from Götheborg. Rain is very pretty, but a bore. Everybody is armed with an umbrella. I mounted my waterproof. The very colour of the people is different. In California men of all races and complexions were burned nearly black, and dusted. Here they are fresh and fair and rosy as in Devonshire, famous for beauty, and in Scandinavia. "I could tell an Oregon man anywhere by his colour," said one to me. I walked over a plain of alluvium with stratified sands from the bank of the Willamette River through the town. It is wide-streeted, wooden, and afflicted by fires, like others of its kind, where there are *ouvriers*. These are the diseases of youth. The wooden side-walks bent and creaked under me, and many boards were broken. These I suppose are signs of premature age. The last pavement of the kind that I walked on was at Archangel last year. From formed streets I got to streets blocked out with foundations dug, then to stumps, and then to the hill-side, with a lumber road cut up it to the forest. I looked over a "city" with street-cars, gas, railroads, great steamers on the rivers, foundries, steam-works, wharves, corn-ships, commerce, newspapers, and samples of all Europe in it, all struggling for life. I looked over it all.

and over the wide flat alluvial plain of the Columbia River, which reaches a hundred miles from the sea to the tide ending at the first rapid. Then down came a thunder plump, and indigo clouds rolled and poured, and growled and perched upon the tree-tops, and hid the low hills. An Irishman with an umbrella, John Dunning, from Leitrim, came and fraternized under a tree. His parents could speak no English, he said; he could not speak Irish. But he spoke intelligently and contentedly and very proudly of his little place, on which grew trees three hundred feet high. When that shower passed he led me to a shanty, to avoid another which was coming. Then he and his umbrella went off to work at the road which he is making into the forest for lumberers. I sat and glowered there amidst a greenery of ferns and shrubbery, amongst tall trees and fallen logs. The fat town cows came about me, jingling their bells as they grazed on rich grass and flowers. They carried me off to Chamounix and to the green hill pastures of the Tyrol. Then I wandered down by the way I came, slipping in mud, looking out at the damp, misty, blue, beautiful landscape of forest plains and river banks. This is Devonshire, California is Spain in a hot summer, Utah was worse than the Sahara till the saints watered the Desert. In spite of the rain I would rather live in Oregon than any American place that I have seen since Colorado Springs.

Thursday, 10.—Landed early at the Dalles, and went out to seek a subject for a sketch. We had got east of the Cascade Mountains into the dry country in a day's easy journey by steamboat and rail. It was over the shoes in dust. When we got off at the Dalles, we were in the arid, dry, dusty land of

the Dalles. Winding watercourses came out in streaks of cobalt on the round orange hills, against which a solitary stunted wind-beaten young pine stood out in strong contrast. Beneath the tree stood the crumbling pillars of a bed of that Basalt whose beds and pillars weather and water have worn into cañons and rolling plains. Not one sign of glaciation have I seen yet.

Friday, 11.—Fine chilly air, clear sky, 48° at 5 A.M., hard sky to the east, clouds in the west. When the sun rose, extraordinary lights came on the western sky. A bit of rainbow, almost devoid of blue and green, shone out against an orange shower behind a black cliff of Basalt that might have been part of Staffa or Stapi in Iceland. The foreground was a sturgeon capsized, floating in green water, with four white paddles out in the air, and two eagles hovering over the big fish. "That hill looks cold," said a man at my elbow. I turned, and there was Mount Hood in sunshine in cloud and, glittering beyond a line of black fir-trees and a dark reach of yellow sand. Rains below had been snow above, and there stood the old volcanic giant, shining in the morning sun, with light to the east and clouds to the west—the most wonderful apparition that ever startled me. No one had ever given me a notion of Mount Hood. I have been so often told of magnificent snow-mountains rivalling the Alps, which turned out to be mere shams, that a real beauty suddenly unveiled surprised me.

Nothing I ever saw in the way of landscape beat the beauty of the sail down the Columbia this fine evening. The great broad stream was smooth as a mirror. Trees at various distances faded from dark-green to purple, and told

dark against the Cascade range. That rose above the forest rounded soft and blue, like the best English lake scenery magnified. Behind, beyond, and far above, towered the vast snow-cone of Mount Hood, shining and glittering in the blue sky like a great luminous cloud. Across it, layer over layer, sailed grey flocks of cirro stratus clouds, and parties of cirri dotted the whole sea of blue air as they broke up for the evening. It was a Ruysdael sky, and a Claude landscape, with something which none of the old painters ever dreamed of in Mount Hood. Oregon is "the coming State."

No. XVI.

• !PUGET SOUND,
Thursday, September 18th, 1874.

MY DEAR MOTHER,

Yesterday I came from Tacoma, at the end of the North Pacific line in Washington, to Victoria, one hundred and fifty miles in Puget Sound. To-day I am going back again in a fog. Yesterday we sailed out of a fog into fine weather. About sundown I could see Mount Rainier, distant more than 200 miles—a great golden cone of light beyond the flat drift and forest lands of Puget Sound. North, at a greater distance, another snow-cone rose above the shining blue sea. Eastward the sky was all one great haze of light, in which Mount Baker was entirely smothered up. With the glass the luminous eastern haze was a rolling mass of clouds resting on the Cascade range, opposite to the Straits of St. Juan de Fuca. It really was magnificent. I found glaciated rocks on the shore and I was happy in Victoria. My family called —

'Why,' said he, "you must go up Humbolt Street, and turn o the right. Why, there's one of the Miss ——'s over here." I crossed and introduced myself to a very pretty girl, and presently I was at tea in the house of my old chum with the wife and three bairns. The lassie who came to visit you with her father is grown to be a big girl. It was so undicrouslly like the highland manse life of old, that I seemed to roll back a generation. The girls came in and whispered, and went out with keys and jingled, and finally, with smart pink ribbons on, we sat and ate and talked, while a big, bare-armed Chinaman, cook and factotum, came in and did some waiting with a plate now and again. It was a revival of my youth, even to blackberry jam. But at night the place was alive with Indians, canoes, and gear; fires blazed on the rocks, and shrieks and yells and whoops and howls of drunken, wild men, made the beautiful night hideous. The stars shone, and the sea shone with creatures that rocked and balanced in the swell below. It was warm and calm and beautiful. And that is the usual climate of the island that I once thought of migrating to, which I have now seen and departed from, and will not forget or revisit.

It seems that a great Indian chief, who had made money and grown old, gave a function here. He bought blankets in bales, and suits of clothes by the dozen, and set up a stage, and threw down the goods to the Indians below, who scrambled. Finally he had out a bushel of silver, half-dollars, and scattered them. Having thus distributed all his wealth, he will be kept as a chief by the Indians of his tribe. They came hundreds of miles to share in this live testamentary act, which is called a "Pow-wow." I thought of an old

Gaelic tale, and of King Lear, and doubted the wisdom of the great Indian chief. The clusters of canoes, and swarms of curious creatures that I saw, were the débris of the "Pow-wow." Victoria is the chicken of a great town. But meantime it is in a shell made of wood. The future of it depends on the making of continental railways; and the interests of Canada and Victoria seem to clash. Both sides want the commerce of the interior to pass their ports, and meantime Quebec has the gate of Northern America. This side is not settled up, and it will be a long time before it is. They are trying the gold bait, but it won't do. At the river "Stickum," they—that is to say, somebody unknown for unknown reasons—got up an excitement: and I have been conversing with the broken men who are going somewhere else. "They cus considerable;" they say "fellows salted the grounds;" they put gold-dust into baccy-quids, and spat it into the pans when new comers came to prospect. These paid coin for the salted claims, worked hard at digging and washing, wore out their clothes, and got their purses emptied. To get to the place and to get out of it was fearful travel. They found mosquitoes in clouds day and night; the ground was bed, and their own backs were commissariat transport. Some came overland through the wilds, and lava-beds, and parched cañon country, by way of Salt Lake, and all who came were "stuck" in "Stickum." But all agree that gold is to be got up there, and that Russia did not sell Uncle Sam. Not knowing I can't say. If there be a good find the rail may be made, and then Puget Sound and its bays and harbours must grow into a great port for the farming land which abounds in the interior. The gold is to be got up there, and I saw [see that

a little north of Columbia River, and thence to Victoria, the land is made of sands and gravels and rolled stuff sorted in water, packed horizontally. Amongst this loose stuff are beds of Lignite from twelve feet thick to less. In these beds tree rafts are scarcely altered, and the stuff burns at "volcano point." In Whiby Island, Puget Sound, near "Useless Bay," the Lignite caught fire in a cliff, and burned for years. Now the fire is out. Near the Columbia some of these drift-beds are smothered under Basalt. The Cascade range seems to be made of old and new lavas, and on this range, at intervals, stand these great volcanic mountains which I have been gazing at with mouth agape. They are all of one pattern, all covered with snow here, and with small glaciers, from which spring the rivers and rivulets which water the drift country and feed the forest. That forest is the feature of the whole land. Trees 300 feet long are quoted. Logs were sent to China lately 80 feet long, 24 inches square, without pith or a knot. The whole low country is forest, and out of it farmers carve farms, on which they grow very poor wet crops, so far as I have seen them. They grow fruit and hops, and near rivers they grow hay and feed cattle and flourish, but they lack men to work the land and to buy the produce, and ships to carry it off to distant markets. Here at Portland, on the Columbia, where I am finishing my letter on Sunday, they have men and ships and home and foreign markets, and, if they could get rid of the bar, they have a magnificent river and harbour made to their hands. I am writing of Washington territory, and of 300 miles north of the Columbia, the country which I have just crossed.

Tell K. what I say for the benefit of his emigrants if

he has any. The climate about Victoria is near perfection they say. In the latitude of the south of England they have the tail of a warm sea-current in the ocean, and a temperate, even climate. The snow never lasts many days near the sea, the rain is not excessive, and the temperature ranges little, summer or winter; so they tell me, especially those who have land-lots. On good land magnificent wheat-crops grow. That is a fact; and in orchards, apples, plums, and pears, and all that grows in Devonshire, grows well in Vancouver's Island. A lad who was always ailing at New York is now growing strong and healthy there—out all day, shooting and working and enjoying life; his mother and sisters are healthy, happy, and well pleased in Victoria, and they are charmed with society there. But working men join in a chorus of discontent. They earn a dollar a day, two in harvest, but they are paid in bills at sixty days' sight, and clothes cost fabulous prices. They have to sleep anywhere out of doors and fight mosquitoes all night; and if they get good grub gratis they have to work twice as hard as ever they did in Europe. So they tell me. Consequently a man who has earned and saved some hundreds of dollars hears of a gold digging, and goes off and gets "broke." Then he comes back and works for a couple of years, and has another start. I never fell in with such desperate wanderers. They have been east and west, and south and north, to Colorado and to Alaska, to Australia, and to all parts of the world, and they have heard of South African gold-fields, and long to go there. I get my pipe alight, stick my heels on the back of a chair and jaw with these wild fellows by the hour.

... of Scotch extract ... One Gaelic

man came from Harris to Cape Breton, and is a ship-car-penter on Puget Sound. Others are Yankees from the East. They are regular Celtic nomads, with their four bones for capital, and the wide world for home. If I can manage it I will send a handbook by post, which will give the statistics of this Oregon country. The whole is too rosy, but it tells some facts. I start to-morrow overland for San Francisco. I have 300 miles of coach in the journey, and rather fear that. The rest is rail. I have telegraphed to my wandering cousin, I. A. E., and may see him. Good-bye.

J. F. C.

PORTLAND, Sunday, September 20th, 1874.

P.S. Telegram from I. A. E., who is away hunting for wild beasts and an estate.

Puget Sound—Log Extracts.—Monday, Sept. 14, at 6 A.M., clouded and still 55° and 65°; started from Portland in the *Dixie Thomson* stern-wheeler down to the Columbia River, in cloudy, muggy weather, landing at wharves made of chips and splinters and rafts of great logs. Sometimes we ran right on shore on the sand-beach; men with saddle-bags scrambled over a plank, and walked right away into the forest; others, who came in teams and *wagons*, scrambled in over the bows. All looked rough and independent, but *not* flourishing. Clean shirts and broadcloth prevailed on board, beards and shirt-sleeves on shore. Fraternized with an old Canadian trapper and *voyageur*. He spoke French with a Norman accent, and English with a Yankee twang. He speaks all manner of Indian languages. He has been up to Sitka, where snow is seven feet deep in winter, and he seems

to have wandered far and wide. He was up Mount Hood with the American surveyors, but he could not get to the top for the wind.

In the matter of glaciers he says that one is on Mount Hood; but, on further investigation, he never saw blue ice there. I saw *crevasses* and *névé* with my glass. I conclude that small glaciers do exist on these volcanic cones. My trapper worked for the Hudson Bay Company, and looks as hard as nails. He proposed to show me the country. I said I was too old. Now this country was entirely given up to such men not very long ago, and Astoria was the capital city, and a trading post. It pleased some white men to hold a meeting, and make the wild country a territory. They elected state officers, and amongst them a Lord Chief Justice, or supreme judge. He asked what code of laws he was to administer. The meeting, after consultation, told him that "he might do just as he d—— pleased." Now the territory is a state, and beyond the Columbia River is Washington territory, which touches Puget Sound.

I landed in Washington territory at Kalama, and waited while lots of freight landed. Indians with fish on their shoulders were sloping about the streets, and buying thread in shops, and loafing. Their dress was seedy European, and their faces were American. At 12.30 started on the rail, and drove up the Cowlitz River. This is a forest country, with savannahs and clearings, and with farms carved out of the forest. The soil is sandy and shingly, the vegetation dank and damp and bright green. The crops were poor, and the day protected from rain. We went up 600 feet and down as



on the Cascade range. Mount St. Helens is visible in clear weather, distant seventy-five miles. The story is that Mount Hood and Mount St. Helens were man and wife. They quarrelled and pelted each other, but the spitfire wife, St. Helens, silenced her husband Hood. To-day both were under a cloud. I saw near the mouths of the rivers large rounded stones and flat terraces of gravel and drift, like the country in the north of Norway and Russia, Sweden and Iceland, but not one glacial mark. The land seems to have risen from the sea, and this hollow probably was a continuation of Puget Sound. At 6.30 I got to a wharf on piles. There were found an ex-waiter from the Junior United Service Club. "Do you know London?" he said. "Yes," said I. "Were you ever in the West end?" "I live there when I am at home," I answered. "Do you know the clubs?" "I belong to one or two," I said. "I was a waiter in one," said a Tacoma waiter. He came out here to make his fortune, ran a saloon, and gave credit. His customers went to dig gold in British Columbia, and came back "broke." So he broke too, and sold out, and now he is assistant waiter in Tacoma, waiting ill pleased, and going home. The general character of the terminus is far from flourishing.

Tuesday, Sept. 15.—My glass stands higher than ever I saw it. A thin, gauzy, brilliant haze is everywhere; the sky overhead is bright, and the air dead calm. Birds on the sea look like boats, boats like ships. Indians in queer, long-sided boats are paddling about; white men, with nets, are turning from fishing salmon, but smelts only appeared for breakfast. I saw an old fellow trolling for salmon last night as Celts fished for "cuddies" when I was young.

Somebody caught a salmon with a minnow. On this day last year I was at Astrakhan, on the Caspian. There the fishing is all for sturgeon, and yet here sturgeon are despised fish, and caviare is unknown. As I could not see the opposite coast, I made up log, and loafed from five till nine; then I walked up the road to the city, and studied the drift. For a few moments, Mount Rainier appeared through rifts in clouds, which rose gradually as the day warmed. I made a pencil sketch. My foreground is the "city." It consists chiefly of black stumps and logs and green fern, and a few log-houses. Amongst them is the Bon Ton Saloon and the Rainier Saloon, and one big wooden house, which belong to the company, and the land-ring. A town lot costs 350 to 450 dollars, 25 feet front, 100 depth. If this grows like San Francisco, that is cheap. If it remains as it is, it is dear. A pound a square foot for ferns and stumps at the other side of the world would be thought dear to an emigrant from Barra. I interviewed a Yankee of Scotch extraction, whose father speaks Gaelic, and a Trondhjan Norseman, each in his mother tongue. The Norseman is not pleased. If he had 2,000 dollars he would return to Gamle Norge. Went on to the forest and to a fire. Three tall trees, about twelve feet in girth, had been set on fire to bring them down. Holes had been drilled with augurs, and their poor pine-hearts were blazing out of their sides. Fallen logs had been jointed with fire, and lay there like vast black reeds. Far off up stream in a valley are the Indian reservations. As Mount Rainier would not appear, went down and got a Chinaman to show me the way. There is not a washer woman in the country. The Chinese are very busy, and caught

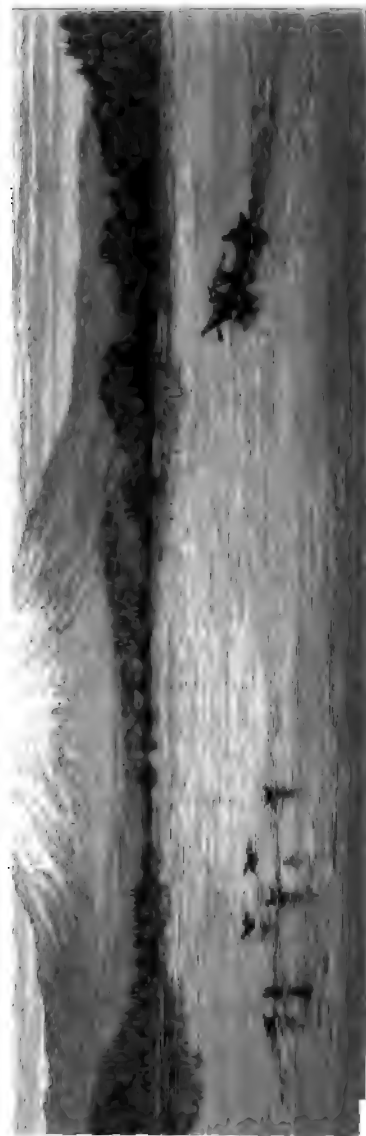
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MOUNT RAINIER—A VOLCANO, PUGET SOUND



nothing. About sundown the mountains cleared. Then snow glowed orange and vermillion, and the volcano seemed red-hot from peak to base. Suddenly it changed to a pale ghostly blue against a red sky. Seventy-five miles of atmosphere and 14,000 feet of ashes, covered with fresh, colourless snow, made a grand screen for rainbow colours to pass over as the shadow of the Pacific Ocean crept up into the eastern sky.¹

Sept. 16.—Up to see the sun rise. The wind was southerly, and the air hazy. The mount looked like any other tall distant grey hill. Copied the form, and tried to put in the sunset colours from memory. From all that I can make out, the landowners of this city greatly need customers, and the Northern Pacific Railway to bring them here. Meantime this is a sportsman's paradise. Ducks and geese abound. Salmon and large sea trout were playing all about us last night. The lakes are full of trout. The forests full of large game. The Indians are quiet, and the rushing crew of hurrying travellers, bent on earning money, rush past. A steamer and a train made night noisy, and shook the whole house like an earthquake, and then came quiet and calm. In the evening, with the General Superintendent of the Rail, and George O'Kelly, innkeeper, went out salmon-fishing in the sea. The fish were plunging all over the place. We hooked two, and the infamous trade-hooks broke like glass. We landed on the opposite shore, and went to an Indian camp, and bought a fresh clean seven-pounds salmon. A wild, picturesque woman, knitting and

¹ A famous American painter has made a portrait of Mount Rainier from Tacoma. It was bought by Mr. John Fowler, who showed it to me in London when I got home.

nursing a baby in a basket, sat on a log by a cheery wood fire. Two small children, about nine and six, paddled about, and a hen and chickens clucked and cheeped under a basket. Fishing-gear and pots and pans, and layers for sleeping, made a very pretty picture on the clean gravel beach by the smooth sea under a steep wooded bank near a great tall briar fifteen feet high, and a clear spring. Wishing to be civil and make friends, I took out a cigar-case and offered the lady a cigar. Why I know not, but thereupon she pointed down the shore with her chin, and said, "Saiwash" (Indian). Then with a face of infinite terror, she sprang up and made tracks along the beach with the baby, followed by the elder bairns. The eldest little girl stopped, stooped, picked up a big pebble, and with a face of rage, terror, and wild fury, she lifted her little arm to shy at me. I stood stock-still with my hands in my pockets. The wild-cat look faded, the stone dropped, and the child turned and toddled off after the squah. We marvelled and embarked, and rowed and sailed three miles in the rain back to Tacoma. This small incident tells ill for the white bearded men of this region. They must be ill neighbours to these wild critturs of the Puyallop River at the end of Puget Sound and the beginning of civilization. Several canoes, loaded with dog-fish oil, salmon, and gear, came to the wharf. A dollar a gallon was all that the innkeeper would give. An old woman, clicking as men click when they talk in the Caucasus and at the Cape of Good Hope, with strange grunts and gutturals for language, chattered. The men grinned. They were the ugliest set of mortals that ever I saw. They would not let me draw so I dried my clothes at a stove, and slept in the rail car at midnight. Then I went

board, and slept on a bench till daylight. We ran about 50 miles to Victoria, passing the famous island of San Juan; a man on board was there when the place was surrendered. The Yankee officer with sixty men and two guns ran his raft ashore at the back of the little island, and ran up the small hill with drums beating and fifes playing "Yankee doodle." British ships, with cannon as many as the others and muskets, looked on from the other side with telescopes. That story be true, that was bunkum and forbearance, and the man who looked on had a good temper, which may have saved the war which the others tried to provoke. The whole of this coast, so far as I could see, is water-drift, with a few large stones dropped in it. It is glacial marine drift, for it is stratified. As soon as I spied the rocks at Victoria I recognized the familiar glacial form. I landed, and in the first reef found a well-grooved rock. The direction of movement was parallel to the axis of Puget Sound, at right-angles to the strait, which opens into it from the Pacific Ocean. The drift is easterly, the strike northerly. It follows that all this water-drift, with rare glacial boulders in it, rests upon glacial rocks. Because of shells found in the drift, the glacial period here was marine. Further north, in Sitka, glaciers enter the sea, and sounds are dotted with small icebergs. Here the glacial period now is marine.

Sept. 17, 1874.—I did not come all this way for nothing.

The whole of these settlements were pervaded by Indians and half-breeds. Some gorgeous with rings, and gloves, and hats, and feathers, and Balmoral boots, and tartans, came on board. Their hideousness was portentous, but they were greatly admired of our sailors. Here has been a clerical row.

The ritualist Bishop has suspended the Dean, and the congregation, who love the Dean, threaten to burn the cathedral (they did try afterwards). What wonderful people we are to enact history over again. At dawn we were off again southwards, diving in and out of fog banks howling, and now and then passing over shoals, where I could see shells strewn on the new country, there forming by the action of waves and tides. As I could not see I wrote. Here a young lady artist kindly ran in to tell me that Mount Baker had popped up in a sea of clouds. I ran out and made a sketch. The young lady did me the honour to give me her autograph and to ask for mine. Her brother was a circus clown, and is a temperance lecturer, starring it. I had a deal of pleasant talk with a clever man, who told me that he understood that his style of comic serious discourse would take remarkably well in England, and that he meant to go there to lecture. He made rather a good thing of it even in Washington territory amongst lumberers and labourers, sailors and Indians. They crowded to this entertainment, and feed the lecturer, who made them laugh and told them the evils of drink, and how he was reformed. I hope to meet my acquaintance in the old country. From other passengers I gathered much knowledge which bears on coal and glaciation, salmon, the grand cañon of the Colorado, the hot springs, of the Yellow Stone, the lava beds, and the climate of Alaska. Our ship was full of wanderers who had been exploring, and who were ready to talk freely about their adventures.

PORTLAND, *Sunday, Sept. 20th.*—Cloudless, clear, warm sun; hills magnificent. Went to church, and later walked to the other end of the city to ship sticks and sundries for

round Cape Horn to Edinburgh. (If ever the captain of that good grain ship should see this my log, I beg him to accept my best thanks for his kindness. I met the sticks in very similar weather, about the same season, out in the western isles of Scotland.) The evening was perfectly clear. The sky cloudless. To the north was St. Helens, with Rainier peeping over her shoulder. To the east was Mount Hood. The sunset colours were magnificent. The snow cones were warm yellow, the sky green such as Raphael saw, and the range for which there is no name. The green forest plains were bathed in yellow light, and the whole landscape was smooth and soft and cloudless, like a single even wash of all the colours in the box, harmoniously blended. I knew it was too beautiful to last, so gave it up, and made a pencil outline, and then sat and gazed from a rail fence. The blue shadow of the low hills crept eastward, over the forest plains, away to the Cascade range, and then up the snow, till a single point of the great cone glowed like a fire on the top of Mount Hood. It lingered there while the world's shadow crept up the orange sky behind it; and then the light went out suddenly, and I went home to the St. Charles. Fraternized here with an English gentleman come to settle in Oregon—one of the right sort.

Sept. 21.—Very fine; bright, clear, hard sky. 64° in the train. Up with the dawn and drove 200 miles to Roseburg. At first the Willamette valley was rich with orchards, vineyards, corn, grain, and forest, with a rich shrubbery and undergrowth. Twenty-five miles up is a small fall over Basalt: gradually the forest scattered and broke up into clumps, and we got to very pretty farming prairie land. Mount Jackson was east

of us, at the back of a rolling mountain range, which, like the rest of the Cascade range, appears to be made of igneous rocks. Skye and Mull, with volcanic cones still entire, rising to 13,000 feet or thereabouts, may enable a west Highland geologist to understand Oregon and Mr. Judd's paper on Secondary Rocks. The foreground here was yellow prairie, which looked like an old lake or sea bottom. It was fenced and cultivated, and grazed by numerous flocks and herds. Single trees stood about, and clumps of forest, like a great English park. Neat white towns come often, and the rail and river often met. Eighty miles up, the valley narrows to twelve or fifteen miles. It is still flat as the sea, and the end of it is only 900 feet above tide-water: at 450 feet the valley plain ends. I noticed that from Eugene City southwards the southern slopes of conical hills are all fine dry grass, while northern slopes are forest clad. I suppose that there is some good reason in the climate, but I do not know what it is.

A hilly, basaltic, narrow valley, with haughs in it, overgrown with grass, fern, oak, pine, maple, sycamore, and a rich autumnal vegetation, took us over a ridge at 950 feet, and then we ran down fast to the Umpqua river. The trees in the gulch were very tall and slender, and certainly were fully 200 feet high. It fell dark before we stopped at Roseburg. I walked to the hotel and tumbled into a ditch. The rest let me tumble out again. The overland coach was overloaded at the door, so I camped in the Metropolitan Hotel.

Tuesday, Sept. 22.—63°. Very fine; cloudless, bright, moon morning, with a heat haze in the air. This is a very fine place on the river, the Umpqua, which comes out of

the Cascade range. The rocks are all igneous decomposing brown stuff, which makes a red soil. I went 500 feet up a hill. The whole country is a network of glens, with conical hills and hog-backed ranges, all worked into shape by the rains. There is not a trace of glaciation. The south slopes are grassy, the north generally forest, with a richer and damper soil. I saw oaks and manzaneta, mountain laurel, pines of all sorts, and much unknown shrubbery. A few twittering birds tried to sing, and a great brown hawk sailed about trying to catch the musicians. Black ants had small granaries of grass seeds disposed about their holes like a sunflower. Far away in the yellow valley a turn of the Umquha shone like a mirror set in pines. The air was still and nearly silent. So there I sat on a hilltop, with my back to an oak, listening for the rare sounds of life and work. I heard a far-away hammer, an axe, a wheel, a cow's bell, a sleepy dog, a cock, a donkey, a blue jay, a fly, the whirr of the hawk's wings, the twitter of the little birds. A series of sleepy summer sounds made the strange silence of the forest more striking. It was a day to be lazy and to enjoy life, and "rest and be thankful." (A year after writing the words I was very near that pass, copying my log, and comparing Oregon and Argyllshire. Those who like one climate will find something very like it by moving half round the world.) Got up and wandered down to the river. It is a rapid, amongst igneous rocks, with a deep broad pool. Into that I presently swam, to my great contentment, in water at 71°. As I sat paddling my feet in the warm water and basking in the sun, with all the seal awake within my body, a shoal of bold little fishes gathered and nibbled my toes. The little brutes took

hold and shook their heads like a terrier at a rat. They tickled me so that I left them, donned my human garments, and went home to Roseburg. There an old man was selling beautiful trout and "suckers," nine for two dollars and a half. About sixpence a pound in these wilds seemed a long price, but the vendor got it. The landlord of a saloon, who sold me an excellent draught of lager beer, said, "I would not now go and jump into that river for five dollars, not I. It's too cold." If I be a seal, I presume he was a land dog and died of hydrophobia before he was born a man. He led me to a shop where a very polite man exchanged knowledge. He showed me specimens; I told him all I knew. The great wants in this rich pleasant land are markets, capital, hands, and knowledge. There seem to be plenty of heads, and pockets waiting to be filled. The whole ways of the place made me think of England as it was a hundred years ago. The lumbering stage-coach and its passengers, the sleepy sounds of quiet deliberate labour in the streets, the shops that sell everything, the dusty men and beasts, and the general air of content, and peace, and quiet, and plenty, suggest merry England, of the poets and Macaulay. But down comes a broken miner to tell of the Pacific coast, and forests, and wilds, and briars, and hard work for nothing, and merry England gives place to Roseburg, capital of Douglas County, Oregon. At eight, started in the Oregon coach for California.

TO INTENDING AMERICAN EMIGRANT, ESQUIRE, ANYWHERE.

No. XVII.

MY DEAR I. A. E.,

I am not a politician: I am a wanderer. The advice of Mr. Punch to persons about to marry was "Don't." He was a bachelor then: I have since dined with him and Mrs. Judy and the olive branches. Unprincipled people will marry and multiply, and after multiplication Division. Birds migrate, men are nomads, and you mean to migrate. Are you a nomad? Will you migrate? Where to? Practice is useful in calculating and subtraction in travelling gear. Use your brains. Set fancy and common sense to argue, and test your properties before you start. If you must migrate, take all you want, and make a pile at home. Then pack it on your back and carry it a mile. You will soon learn how much you can do without. Your luggage will soon go into your purse, and your money will be turned into circular notes if you are migrating to wilds where you must carry your own load. One suit of working clothes and a blanket commonly are a complete miner's outfit. If fancy will go for digging gold, let common sense try it at home. Pack the pile and picks and shovels on Shanks his mare, and walk to the nearest river. Wade in it and work; dig holes and carry sand; make leads for water till you are tired and hungry. Then fast if you have forgotten to carry grub, or buy food at a shop and pay double price. Make a fire, cook and eat, and sleep out wet or dry till you realize life at gold-diggings. If you like it and think yourself able to work and trade,

sell the sand-hole or your share, if the ground is not yours. Put some brass filings and broken glass in; salt your claim, and trade it off to a stranger, and make tracks with the plunder. If the buyer remonstrates, knock him down and stamp upon him. "Cut him" if he desires your acquaintance, that is, kill him with a knife; or shoot him down. If you do all this and get to "Stickum" in fancy, let common sense put the cute biter in the place of the bitten. Fancy being "stuck" with a salted claim, and "cut," and "broke." and driven to march for several weeks, and "make tracks for the settlements" to seek work, through the "darndest rough country that ever you see." That portrait was painted from life orally by many autobiographers, "down on their luck," in the far West. Others painted in glowing hues. They showed nuggets and dust and greenbacks to green-horns, and shares in priceless properties which were dirt cheap. Common sense remarked to my Fancy, "Such generosity is inhuman: heave half a brick at him" is more like our humanity. That Mammoth Red Bat on the frontier was a caution to strangers bound for "these dig-gins." So common sense and fancy and I jogged on together after the setting sun.

If you must migrate, my brother Vagrants, you must go somewhere. I owe you a day in harvest for many kind acts done to me in your own European lands. I wish you well and this is my counsel.

You free, sagacious, hardy Norsemen of the Teuto-Celtic-Icelandic cross-breed have taken the right road. You have the people of your own sort from Iceland to look out for you. You will be

welcome there. Your own rocks and sands and bogs grow little but grass. You know about cattle and ponies, cod-fish and sharks. You have been mighty sailors and colonists. You found America. You are Nomads by nature, smoked out of your nests by volcanoes. It is all in the natural order of things that you should follow leaders and swarm : take your time and do it well, and go ahead.

You, my amphibious Scandinavian friends, are fishers and hunters, sailors and farmers. You are Northerns ; keep to the cool north if you wish to keep your health. Join your kindred in America ; stick together as you have done thus far. If you meet a Mormon missionary send him to Utah. The strangest sound I heard in that hot basin full of saints and salt and sulphur was the familiar voice of a Sætar Piga, who ought to be out with her sisters herding kye in fresh cool air, by purling sweet snow-streams.

You Finns, Lapps, Russians, and Poles, and you North Germans of the northern plains, keep well to the north. You will find plenty of elbow room in Canada and about the lakes, in plains like your own, where snows cover the ground in winter, and the summer sun shines hot on lands that are rich and flat. You need wintering, and you are used to deal with flats and water, cattle and corn. Don't be flats yourselves. You German vine-dressers of the Rhine, who work on steep rocky hill-sides at home, and brew horrible drinks in Californian plains, where you came to dig gold, find some rocky hill-side near a big river, and you may yet give me a glass of wine. You may fit your new American country to your old skill. Your skill is wasted in dry California.

You Italians of the plains, go to California and irrigate, as you learned the art from your Roman ancestors. You may easily grow poplars, mulberries, and vines, Indian corn and pumpkins—four crops at once in the same field, as you do at home in Lombardy. The Sierra Nevada, like the Alps, has snow enough to water these plains, which are rich as your own when properly tilled. Your skill is needed out in the west, where crops fail for lack of water; but you would freeze and sneeze in Canada and Oregon.

You, my English and Normandy friends, go to Oregon or British Columbia. You will keep your cheeks rosy where apples flourish; and you can brew cider to your hearts' content in this "Avalan." You Cornish and Welsh metal miners, stick to your trade. Go west and prosper in Nevada, or in California or in Oregon or in British Columbia between granite and altered rocks. The minerals of these lands are not half explored. Where sands are golden prospect up stream, and you may strike fortune. You need not go to the volcanoes. You don't mind heat; go anywhere; you will be welcome if you bring knowledge, which everybody wants out in the west. If you are content to earn wages, you can earn them easily. You coal miners, keep east of the Rocky Mountains. You French incendiaries, go to Utah, or roast yourselves in any other wooden town, as you did in your own pet Paris. You Aristo, keep to the east if you seek polite life and fashion. Go to the west if you want to buy land and continue to be an Aristo, and lord of yourself, that heritage of woe. Remember one head is worth two hands. Brains are better than four bones. If you are a Chinese coolie, body and

bones and pigtail to boot, on the Pacific Coast ; and be head of a large clan at small cost. If you have any dignity about you, pack it up with your court dress, and be content with a Sunday suit. You who are blessed with brains, use your wits, and you will float up in the crowd like a cork in the sea. You may easily rise as high as Haman if you are too cute. You, my Celtic friends in Ireland and in the Scotch Isles, do as your kinsmen of Iceland have done. Listen to no stranger, for you may be sold. He may want to "run" you, and speculate on your properties. Few understand you and your nature ; but of these many "stick" you, for you are easily gulled, and very useful and valuable as hands.

In the settled east you serve and make the worst of servants, for you all want to rule. There the land has landlords who know you not, and who only care for you as they do for valued live stock. Hold up your head—there's money bid for you. When you have got enough, go west after your kindred, follow your friends and take their counsel. Many workmen are rich landlords, who hire Chinese for themselves. You may talk Irish all over America ; you may talk Gaelic in the dominion ; your kindred there need your properties, and will help you to rise in preference to other "hands." But mind this : it's every man for himself "in the Green Isle that is in the midst of the deep." You and your many good qualities are wanted over the water. If you are not wanted here at home, if the cry is "crowdy crowdy ever mair," and the Sunday dinner, potatoes and point, go to your kindred : speak Gaelic, learn English, acquire the nasal twang, and, above all, learn from Yanks to go ahead. Go to "the Green Isle," after your ancestors, the Fenians, and

drink beer like Fionn. I speak to you as Oisein did when he came back from the Isle of Youth. You shepherds of the French Landes and Spanish Llanos, go to California and to New Mexico; take your own breeds of sheep used to pastures brown, and able to wear their great-coats in hot weather. Take care of your own fleeces when you get there, and don't drink that sour German wine in billiard shanties. I never saw one of your southern breed in the north. You could not flourish there amongst snows and rain. You Southern Europeans go south. When Greek meets Greek then comes the tug of war. Let Greeks go to Wall Street. If Turks go to America they must do as the turkies do there—gobble and be gobbled. The sparrow on the house-top may learn from the swallow under the eaves. The cuckoo may tell the blackbird where to pick up worms. If the worm gets up too early, the early bird will eat him. Householders who are houseless may learn from tramps where to find house room; and you, my dear I. A. E., may possibly learn something from a landless Vagrant, who has seen many lands and "mair toons nor Tobermory." In Chinese fashion I salute you all.

CHIN CHIN.

Extracts from Log, &c.—Overland Oregon Route. Portland to Frisco.—At 8. P.M. started in the overland coach with a man who objected to smoke and took the best place. Jolting fearfully all night, rattled like a pea in a whistle on the back seat. I slept in snatches, but every now and then the coach jumped on to a log bridge or off it, or over a stone or a
 was thrown five or six inches up. to come down

on a board with a fearful bump. My hat was crushed flat against the side, and it was hard work to rest. A Chinaman, with picks and shovels, and iron pails, got in with a bundle of blankets. Him I kicked, but that did not help much. At last I got my legs stretched out of the coach and slept. From time to time we crossed the trail of a skunk. The smell was the concentrated essence of fox. I knew it from having crossed a trail on the Pacific Railroad, and from having made acquaintance yesterday with a terrier. His master, an old runaway man-o'-war's man of 1849, had just tramped up from Frisco. He was camped in a gulch, with a good fire, when his dog barked.

"I knowed there was some'ut up when he barked," said the old sailor, "so I gets up and looks, and there, in the moonlight, I sees a skunk comin' along. Well, he goes right at his head, and he killed him right away. He swished once, but before he had time to swish again he was dead."

Here the dog got up and wagged his stump of a tail, and laid his cropped ears back and smiled, and picked up a chip of wood and brought it, and I smelt skunk. The master had his shoulder put out at the Dalles, and went to Frisco to get it put to rights.

"I thought they could do anything in Frisco, but they said I was too old, so I sets off to travel back to Oregon. It's hard work tramping with a load, sir. I was born not far from London. I went to sea. I was 'prenticed at Lime-house; and I was in a man-o'-war at the Sandwich Islands."

"And then you ran away to the diggings," I said.

"Yes, sir, you bet. I ran away for the gold diggings in

1849, and I've been in this country ever since. I've made a power of money. When I got it I used to go a voyage to Portland, and then go back and dig till I was tired of it, and then take another voyage. Now I'm broke."

He was peeling tatoes, having got a job as cook's mate from the landlord. I gave him half a dollar, and he went and got a drink of beer, and returned with the change. He seemed astounded when told to keep it for luck. There's not much given away in Oregon, but a good many people and things are sold there. At nine, we stopped for breakfast at a farm in the forest, about 1,000 feet above Roseburg, in the cross hills which here divide the rivers. A general desire to take care of number one seems to pervade all the people I meet here. Everybody ate up all he could, and nobody cared for the stranger. "Heave 'arf a brick at him" was characteristic of hospitality to strangers in the black country, "to hum;" the rule here is, "Let the darned cuss take care of himself, and give him a wide berth; he may have bricks in his pocket to heave at me, or something worse." I became exceedingly polite to strangers in Oregon. The country all day long was like a shrubbery in a pinetum, with oaks, and hardwood, and grass glades, with occasional open prairies, farms, and orchards. It only wanted "the hall" and "the parsonage" to make this an English park in a hill-country well watered. We got over a steep pass called "Grave Crick," where somebody was buried near a streamlet. A young fellow, at "Jump off, Jim," came on board and explained the topographical names. "Jim" had to jump off because of the Indians at his place getting scarce. Then we got to the edge of the country, and a stranger

to translate that), and to old diggins which once were very rich, as a stranger told me. Now they are stopped for lack of water, and capital is wanted to dig a lead from the river. Rogue River is a beautiful stream of clear water full of fish. I have caught a good many in my day, but I was not fishing in Oregon. No doubt that river brought gold to these dry abandoned "placers" before it dug its present bed, in which there is nothing but suckers, and trout, and green water. We dined and picked up a family of four. Of course I had to give my place to the lady. The heat got intense after the cold night, and the dust was fearful. We bumped into Jacksonville, and there a very pretty, modest, quiet, country girl got on board and took my new place while I was eating apples at a stall. I had not the heart to move her, so I was shunted into the worst place on the middle bench, with a strap to lean my back against and my sleepy head shaking loose. The Chinaman, who tried to pick my pockets in the dark last night and failed, departed here with his gear. At "Bear Crick," in the Siskyeoo mountains, about eight, I got out in the moonlight, stowed my goods in a barn, and halted at "Casey's," because everybody on board said that the charges were terrible, and the man a heathen. I reckoned that I should have the house to myself, and I was right. After thirty-six hours on foot and on wheels I kept fresh by eating little and drinking water. On this journey something was learned about the philosophy of topographical philology. The tribes of the earth have come here, but for some reason they selected English as their common speech. All the settlements, or nearly all, have English names, pronounced by various Aryan and Turanian tongues, and all these have a

meaning still for English ears. The mountains, named by the Indians, retain something of the Indian sound. The meaning is forgotten and the name only remains. If any other tribe follows, "Jump off, Jim," altered by Grimm's law, by Aryan tongues from Europe, and by Chinese from Asia, may become as incomprehensible as Siskyeoo is to me. But I suppose that the name means something descriptive.

Sept. 24.—Mr. Casey came from Georgia, and says that he is a heathen. He is a very blasphemous old person certainly, but not much worse than my companions for the last few weeks. His wife is from Dundalk, and he is very clever and amusing. A lot of Germans from Jacksonville had brought a very stout lady to the stage. She got my place: I got more room, a welcome, and good quarters. All about are hills, trees, farms, and fresh water. This really is a magnificent country and climate. My host and the Germans were up with the dawn, and after breakfast the Teutons drove off from the Celts in a "wagon." On the heathen's table is Baker's book on the Nile, 1868, printed in San Francisco. Rather good prints hang on the walls, with a map of the States. They represent "The Life of Christ," in eleven coloured pictures. Looking-glasses, clocks, good beds, good furniture, carpets, chairs, plenty and comfort, are everywhere in this old Irish American heathen's den. The wife is a Christian apparently. A wagon, followed by another, and a lot of led horses, passed, with women and children and chairs on board, and men with big beards and wideawakes. "What are these?" said I. "Oh, they've been on a visit, I guess, or they're going on a visit." Another team comes up, and there follow a quick fire of jokes from the landlord,



d by ready German laughter. Then off goes the team
sunny dust of the road. The team is the butcher's,
ref, and they bring a petition for reducing the pay of
the officers, signed by "Macalister Schumaker," and
from all parts of the earth. Why should English
the rest in such a crowd? I could hardly find an
name in the list. Here goes old Ireland. "Cuss!
cuss! Blasphemy! They sign your death-warrant
can get a jury to find you guilty, and we pay them
dollars for that. Ha! ha! ha! Blasphemy! Cuss!"
he petition! You know your fate if you reckon to
an office. You won't get much salary." And then
y of oaths. Oh, my Chartist lecturer and reformed
, author of the *Purgatory of Suicides*, admirer of
preacher, schoolmaster, and steady clever clerk in
eral Board of Health some twenty years ago; were
h topics your texts in Ould England when you stirred
ob who burned a mill, and you were sent to work out
l problems in a stone jug for breaking English laws?
ench *oucrier*, whom I saw in force in Paris, what have
de by your revolutions? You wise English work-
s it worth your while to go to Oregon, and hunt that
d warlock hare over there with Casey and the Fenians?
ell I remember the old Radical cry, "Burk the
—them pampered prelates that batten on the fat of
d and the sweat of the people!" Cut down expendi-
st down the crown! turn heels over head! down with
ing that men have raised! burn and destroy! Dises-
and disendow England and Ireland! shoot the land-
take the land! Repeal or rebel! Aboo! But when

all these radical reforms have come to fire raising and red ruin, I want to know what is the good of going all the way to Oregon to disestablish and disendow your own State officers in a free republic, and break your own laws. Mob, the first king of Oregon, you are a fit subject for the author of the *Purgatory of Suicides*, my Chartist friend of 1848. If there be nobody else to hang you, lynch yourself. But so the world rolls. Butchers, beef, and petition roll off in their waggon and their shirt-sleeves as if it were an English June day, roaring and laughing at Casey's jokes and curious cusses. No wonder Germans prefer Oregon to Hanover.

So far as I can count I have made 8,800 miles in eighty days, at the cost of £2 12s. 6d. per day; this is the dearest and queerest travelling that ever I did. A pound a day has carried me round Europe. I suppose that I pay for seeing all Europe broke loose in one day in Oregon.

I spent a very pleasant, lazy, amusing day with Casey, watching men and ground-squirrels kicking up a dust, and pondering over men and manners. At night the stage came, and I went away.

We crossed a range of hills and the Klamath River. At Yrika, pronounced Wire-ee-ka in order to puzzle Greeks, we changed stages, and drank beer and warmed ourselves at a stove. At dawn, Shasta Bute, Black Bute, and four other volcanic cones in California, were visible against the eastern sky. They seemed close at hand. From our point, some 5,000 feet above the sea, Shasta, which is 14,000 feet high, compared unfavourably with the Oregon hills, which are near the sea, and covered with snow. But my waking view of Northern California was very good.

he snow lay in patches on Shasta Butte. I could make fragments of an avalanche of frozen snow reaching a distance. My first foreground was a flat of yellow pines, sage brush, and grease wood, extending to a great y broken hills shaped like volcanic cones, and craters or lava heaps, ranging N. S. along the line of the Cascade mountains and volcanic cones. Seven miles farther on we to these foot hills and to a forest, and I stopped at the on to look about. The coachman wanted to take on luggage; I wanted to use it, and there was a difficulty. "What confounded unreasonable cusses these passengers are,"

id, "they want their luggage; they never are satisfied." crowd grinned and I got my goods. After a bath in a at 50°, and a jaw with the natives, and breakfast, and at, I walked up a hill and found brown sandstone beds dge, striking N. S. This great line of volcanic disturb- is on the strike so far as I have gone. On the hills scattered large blocks of igneous rock, each a cart-load, mice, and igneous rocks of sorts. I could find nothing al to be sure of. I measured the angle of two volcanic s roughly, and made the slope of Shasta 67°, of Black : 45°. The latter is a small cone exactly like some of models, with an open crater and a lake in it. I could ind a good point for a sketch. Trees were in the way, the air was full of smoke, so I wandered down from dusty hill and drank clear pure snow-water from a . The people say that Shasta never smokes, but there is a ng sulphur spring right on top where eggs boil rapidly. it steam escapes, but the smoke in the air is from t fires. I have now seen along a line of about 600

miles: 1, an unknown peak; 2, Mount Baker; 3, Rainier; 4, St. Helens; 5, Jefferson; 6, Hood; 7, Jackson; 8, Diamond; 9, Shasta; 10, Black Butte; and a great many minor cones without snow. So far as I can make out, the rule explained in *Frost and Fire* holds good. The longest slope in a cone of eruption is to the S.W. in the northern hemisphere. The easiest ascent is on that side. In many cases the broken side of the crater is to the north-east, which ought to be the steepest and weakest part of the cone. This whole region is pervaded by "soda springs." Two were near Casey's, and more are here. We stopped the train to drink from one north of Roseburg. I have tasted several and find that they differ greatly in nastiness. One was Epsom salts by lingual chemistry. The people hereabouts are all possessed by the notion that they will find true coal. They are mining at Coos Bay and exporting. Some say that the stuff is brown coal, like the stuff found about the Rhine and in Mull, and elsewhere, among igneous rocks. Others declare emphatically that the coal is true coal in sandstone, with the right fossils. Not knowing, I cannot say; not caring, I was not such a goose as to go to Coos Bay. "Sir," said a man to me one day, "the geological survey of this country was put an end to. The honest men who wanted to know the truth and tell it were in the minority. The fools did not want to spend money on nonsense. The rogues wanted to speculate, so they dismissed the State Geologist. Why, sir, there was a man from the east who went to that coal country and reported that it was all brown coal. He had to clear out pretty smart 'n reckon. They have been chasing him ever since. He has never been seen

nothing but igneous rocks and brown coal on this coast. My hosts were Irish, with a Chinese cook, long in the tail, short in the temper. The sun was scorching. My glass is 71° in a close, dark, cool room. I am not game for much work in such weather after a night of shaking and jolting, and shivering from cold when dawn began. Made a sketch from the roadside in the cool of the evening. Without knowing it, I saw and sketched a glacier, of which I afterwards bought photographs from Watkins at Frisco. The region of Shasta is haunted by great wild sheep.

Sept. 26.—After breakfast, started in the stage, and went up 600 feet through the forest, and down a little to Strawberry Vale. Here is an open glen, with Black Butte to the left, N.W., and Shasta in front, N. It is a fine view, but I went on. Black Butte is a perfect volcanic cone of loose angular stones, amongst which great trees grow nearly to the summit. No one has ever found the colour of gold in any of the streams which flow from Shasta. We drove on through a forest of giant trees, over volcanic rocks and dust. In deep gulches, the trees which grow in the bottom towered far above us on the edge. Three hundred feet is said to be a common height here, but the girth is small in proportion. At "Soda Springs" found a good house and tourists, and tasted cool, pleasant, healthy water with sulphuretted hydrogen in it. The place is on the head waters of the Sacramento. The rocks are volcanic, but pebbles in the river seem to be rolled fragments of old altered stratified beds, like those which I saw about the Yosemite country. The river comes in from the west and from high snowy mountains, part of the coast range. The water is beautiful, clear as crystal, a

brawling burn full of salmon and trout. They catch both with salmon roe. Amateur fishermen came on board, and we fraternized over hooks and lines. Lower down I fell in with an Indian who had two squaws mounted on one horse, a fishing rod, and a horse loaded with dried salmon heads. There were more than two hundred. The average size indicated seven to eight pounds. The teeth were formidable, white and hooked, such as I never saw in Europe. We came in sight of Castle Rock to the west. It is a great wall like the Yosemite walls, and about as high, all peaks and pinnacles. A great stretch of forest, many miles of a slope, lay between the river and the rock. Went on down the Sacramento to Slate Creek, where supped with a coloured gentleman and stopped. Went to the river and bathed, and fancied myself jigging salmon again in Argyllshire. The rocks are black and purple slates, striking N.S., dip E., splintery and burned. A gold digger ferried himself over the tail of my pool on a raft of small fir poles. He is making two dollars a day, but then he has to pay dear for everything he wants. I fraternized with the stage-driver and gave him a cigar. He was dead tired; a weak-chested, red-eyed, sickly man. Nevertheless he drove six horses forty-five miles a day all winter, when he had to go a mile an hour at many places. The heat, dust, and jolting all this day were terrible. The passengers who had come through without stopping looked pale and jaded, and slept most of the day. The refrain of a workman's song comes up

"eight hours work, eight hours play,
eight hours sleep and eight shillings a day"

Here are the eight shillings, but I don't seem to see much sleep or play. I have been taking it very easy, but since I travelled from Archangel southwards last year in a tarantass I have not had such hard work for my money. £2 12s. 6d. a day is high wages, but I spend that sum, and would have to earn it if I lived here.

Sunday, Sept. 27.—48° in my room. If my barometer is right, we are still about 2,700 feet above the sea. The fiddle and the banjo and plate-washing and coffee-grinding went on till a late hour last night. My room let in the moonlight above, and my window was open all night. The air is so dry and pure that I felt fresh as paint. When the sun got up the heat was fearful, 76° in a draught. Discoursed an intelligent man, who says that much Porphyry is in this region. The quartz veins are not rich in gold; he called them "*beds*," he may be right as to the large leads. Most of the gold is in small "*strings*" of Porphyry, with quartz amongst it in crystals. He was quite up to the upheaval of rocks, and attributed the movement to sidelong pressure, caused by the earth's cooling and contraction. He was going up Shasta for curiosity. His dress was a shirt and trousers. A watch and chain were the only outward signs of civilized, educated man. Eastward, in Idaho, under Basalt, they have hit on the bed of an old river, with rolled stones in it and washed gold. I had heard of the find from others. Manifestly the Basalt region covers an old surface, with all that was on it. This being a day of rest, rested, as did the rest of the people except the stage-drivers. Wrote a letter, and dawdled till evening, when the stage came, when I started. It was a very steep, up-and-down, zig-zag, dangerous, rough road, in the

Sacramento Valley for two stages. Then we struck the "MacLeod" River—a roaring mountain stream. Intelligent travellers got on board. One had eaten sterlit at Vienna last year; I ate sterlit last year at Archangel. His party paid four dollars a head for the fish alone. We jolted on in bright moonlight till 2 A.M., when we struck the rail at Redding. Two hundred and seventy-five miles of stage had finished men who came through from Portland. One, a banker, was so done that he could hardly walk.

Monday, 28.—"Can you give me a bed?" said I. "I reckon I can: but I cannot give you a room to yourself till the train goes," said the station-master.

Not liking the idea of a warmed bed, got a night-watchman to show me the way to another house. He carried my bag, and refused a tip. Camped in a sort of deal box, lined with old sacking, but clean. A pig started from the porch, and a dog hunted him. Several hens fled, cackling through the yard. Slept like a top, and rose at nine. "What can I have for breakfast?" said I. "A'most anything you want," said a frowsty boy, half awake. "Sterlit soup and elephant steak," I said. I got a tallowy mutton chop and a beef-bone with strings on it. Found a saddler, and got my bag mended. My leather was his admiration. American leather is abominable, he says. Sang:—

" And take from me these fine, fine shoes.
Made o' the American leather,
and gie to me a pair o' brogues
To walk among the heather "

* * * * * American stage. * * * * * and the







saddler. "That's not American; that's Scotch," said I, "and it ain't humbug."

One of my fellow-passengers last night assured me that on the north-east side of Shasta there is a glacier which reaches down to 9,000 feet. It is three or four hundred feet thick solid ice, a mile wide, and two or three long. I got a photograph of it afterwards, and thought of American leather. I suppose that I saw it, and did not recognize it to be a glacier. The naturalist asked me if the rook was not the young of some species of crow. A bird so besung of poets ought to have been known to the gentleman who snapped me short about glaciers. The nondescript described at Tacoma is the Rocky Mountain goat. It has a fleece nearly as fine as the Angora goat; it is white, and has black polished horns and hoofs like a chamois. Hides and horns are in a museum at Frisco. A wandering miner described the creatures to me. He met them about the foot of Mount Rainier, where they seemed perfectly unused to the sight of men, and tame through blissful ignorance. The same authority described the habits of the Bighorn, the mountain sheep of which there are two kinds. One sometimes weighs 200 pounds. After dinner wandered down to the river, and swam there. They tell me that Mount Baker has been seen from Sacramento, distant about 700 miles, and 11,000 feet high. As the visible horizon is distant 94.85 miles from a height of 6,000 feet, they seem to say the thing which is not. I saw Shasta from my bathing-place. About sundown a curious regiment of clouds grew in the clear sky. The nearest was distant some fifty miles above Shasta. The rest I suppose were above other snowy mountains and above the lakes to the east

of the Cascade range. To Rainier is about six degrees of latitude, a cloud far higher than Shasta—say 28,000 feet or more—might possibly be visible above Rainier some 430 miles away. I saw the line of clouds, and drew them. Then came some movement in the air, and the line curved slowly into a bow, bending eastward away from the sea breeze. Then I went to my temperance hotel, carried my luggage to the rail, and at 3 A.M. awoke, and departed in the train.

Sept. 29.—At sunrise there was a fine range of volcanic-looking mountains to the east. In the foreground, corn land and prairie, and single hardwood trees growing like trees in an old English park, or like the cork wood near Gibraltar. The fall of the Sacramento is less than 1,000 feet in 170 miles. The valley of the Sacramento is, like the Wellamette valley in Oregon, a great plain, which looks like an old sea bottom. The next valley south is like it so far as I went. The volcanic range seems to come up in a hollow on the strike. At Sacramento fell in with a horse-racing crowd, who were dusty and a bore. Got in to the Grand Hotel and was grandly lodged. Got the *Times*, Sept. 1, and read "K. A. E. W. V. C. all well," &c. I should have got the same news anywhere for the cost of a short advertisement.

Thursday, Oct. 1.—At Frisco, went to the Chinese quarter; saw an eating house, an opium den, a rag picker's underground den, a theatre, and a gambling house. The play was fun. The audience were numerous, grave, and greatly interested. The actors were magnificently dressed in silks, and robes and flags and gold. They squeaked and ran about a great deal. The play was historical and represented the

Friday, Oct. 2.—Drove to the Cliff House and Seal rocks, and tried to sketch the sea lions through a telescope. The brutes gave tongue like a pack of hounds, and opened their great mouths at each other, and rolled about and slept; some scratched their ears with their hind flippers: generally they looked like paralyzed mastiffs. They got to the tip-top of the high rocks. Pelicans, gulls, cormorants, and other birds, stood about in clusters. We looked at them from a good hotel, and were greatly diverted. The fresh sea air was charming, and the drive through the park, race ground, and burial ground, was pretty. Dined in company with an expert mineralogist, who told me about the gold-bearing rocks &c. 'Cretaceous fossils are rare, but enough were found to prove them. Specimens got from the slopes of Shasta, 6,000 feet up, were sent to Professor Ramsay. They date Shasta.

Saturday, Oct. 3.—Sailed soon after noon. A lot of Chinese and Japanese women on the landing-stage were very picturesque. They pretended to cry, but I could see dry eyes with my opera glass.

NO. XVIII. SLATE CREEK, SACRAMENTO RIVER, CALIFORNIA,
Sunday, September 27th, 1874.

MY DEAR MOTHER,

I hope that the Portland landlord posted my letter thence. I started by rail on Monday, and ran 205 miles south to Roseburg. I left my card for my I. A. E. cousin at Eugene. He was off to the hills "hunting." I saw his chum at Portland; he suggested that I. A. E. should follow my fortunes, as his father will not let him buy land and settle in

Oregon. I have left my route for him, and hope that we may start on the 3rd of October from San Francisco for Yokohama. I stopped for a day at Roseburg because the stage was full of men, women, and children, and members of the State Parliament. I spent my time in bathing in the Umquha River, and in marching about breaking stones and ruminating. At dark came the train, and the stage started with me and one passenger. He was fat and selfish, and snored horribly. Now a stage in this country means a square tray with little stuffing, a back seat and a fore seat, and a seat in the middle with a strap for back. There are no springs. The body is hung on leathern straps, and these are made fast to a frame on four strong cart-wheels. Luggage goes on a hind boot and a front boot. One passenger sits on the box by the driver. He drives six horses from the box, and manages the brake with his foot. They carry mails, and make about six miles an hour. The road is not much wider than the coach; it is formed, not made. I have not seen a man at work on it since I started. It winds about, up and down hills, and round cañons, without a rail or stone at the side. It really is a wonderful driving feat to get along safely, and it really is very hard work to sit in the stage. I got my head down on a bag and my feet curled up, and I managed to sleep now and then, but my hat was crushed, and my old body was tossed up and let down with a bang at short intervals all night long. At odd times we crossed the trail of a skunk, and smelt the brute. At dawn I sat up, and all day I held on by my hands and exerted my strength. Further, we

so I got out and camped with a man called Casey. He was an old blaspheming Irishman, who told me that he was a heathen before I had been ten minutes under his roof. Nevertheless he gave me a tub of cold water and a clean bed, and I slept calmly. All next day I dawdled till the next coach came along at dusk. I scratched my ankle with a poison oak and I am poisoned. I got in and travelled all night, and slept wonderfully. But when we got to the foot of Shasta and breakfast I halted again, and camped with Kavanagh, a flourishing Irishman, with an orchard, a shop, a station, and a mill-race of pure cold water at his back door. Therein I bathed. I spent the day in wandering about the hills and sketching, and the night in peace and quiet. Next morning we had a grand drive through magnificent trees round the foot of Shasta, 14,444 feet high, and down to Soda Springs on the Sacramento. The humour on me was to go, so I went all day to this place. Mine host is a coloured man from Ohio, who came out in 1849, got rich and ruined, and now is cook at this station. He prefers "*à la* dishes," he says. I have found out that he means venison *à la mode*, and that it is very good. The first thing I did was to get into the Sacramento and swim, and beat my clothes with a stick to get rid of the dust. The first thing I did this morning was to repeat the dose. Both times an old miner with big boots ferried himself over my pool on a tiny raft with a long stick. He is earning two dollars a day by washing the stones of this beautiful mountain stream. The water is pure as water can be, and it brawls down a grand forest-clad glen over bright stones on which the sun shines gloriously. This river is full of trout and of salmon with

great hooked teeth. These the United States are breeding and sending to the east coast. The breeding station is two stages lower. Fishing Indians, riding on mustangs, prowl about the whole country. They are tame and talk English, and wear boots and ragged clothes and hats. One wanted to know if I was married yesterday. "Have you got a woman yet?" he said. Last night a stage-driver got a banjo, and a helper a fiddle, and some half-dozen men congregated in the saloon opposite. That is another wooden shanty, and with the stables make this town. I joined. Presently they played a reel, so I treated the crowd to drinks all round. Then the old booted miner got up and danced a solo. Then I took the floor, and we danced a duo. "I reckon you can dance, mister," said the miner. And that miner was right.

I have recovered my youthful grace and agility in a strange fashion. I shall begin to forget that I am fifty-two if this life lasts much longer, and then I may follow the example of the patriarchs, about whom I have been reading this hot Sunday. Even the miner has struck work to-day, so we are not all heathens in California. "This is the Sabbath, and I don't like to do much hard work to-day," said my black landlord this morning. After dinner I mean to go on to "Redding," where we meet the rail at three in the morning. By eight or so on Monday I may get to Frisco, or I may placidly sleep at Redding, and get in on Tuesday. The great beauty of this kind of travelling is that 'a fellow can do just as he d—— pleases."

I have the chance, write to my mercantile cousin, and he will have a good evening for a

banker with some capital and a conscience in Oregon. The country is rich beyond description, and the people in it are entirely devoid of capital. Those who have money lend on mortgage of real estate at 12 per cent., paid quarterly. Some lend at 24 or more I believe. So if anybody would come here and lend at 6 or 7 or even at 10 per cent. he might command the market, and hold half the State in pledge. Everybody wants capital to work rich land, and make openings for produce of the most excellent and luxuriant kind which wants a way to market. Mines and railroads also want capital, but they might whistle for mine. Were I young and avaricious I think I would try banking here in Oregon. Now California and San Francisco command the money-market, and the bankers grow rich on mortgages at 12 per cent.

My old heathen Casey saw this, and we agreed over a pipe of baccy.

Now I must shut up, and dine preparatory to a start. I have had my thermometer at 48°, 75°, and 105°, in the sun. I am too lazy to go out and walk about in the dust. Hence this letter, which will be followed by another from Frisco. Farewell.

J. F. C.

P.S. *Sept 30, Frisco.*—I have letters of 21st and 22nd of August, and the *Times* of the 1st of September. I might have telegraphed in a few hours from London.

No. XIX.

SAN FRANCISCO,
30th September.

MY DEARS,

Forward this to your grandmother. I have read in the *Times* of September 10th to-day, English dates twenty days old. As all seems well "to hum" (at home), I have taken my ticket for Yokohama, and sail on Saturday, October 3rd, in the *Great Republic*, a wooden paddle-wheeler of large size, which hopes to do the trip in twenty days. When I get in I shall be half round the world. I have travelled a good deal more than 9,000 miles since July 6th, greatly to my own satisfaction, comfort, and personal advantage. I hear of numerous passengers of British origin bound my way—"globe trotters," as we are called in this region. After I left Slate Creek we drove up and down and round about hills on the right bank of the Sacramento in a glorious full-moon light. I am not very nervous, and have got used to American staging, so I was not badly frightened, but my reason told me that it was not, strictly speaking, safe to be whirled down steep places above a roaring river by six Oregon horses driven from the box by a man who also managed the brake with his foot. But that was nothing to driving feats performed on that road. At one place our near wheel went into the bushes, and we stopped. A train of "wagons" was coming down the hill. An old fellow sat on one of two-wheelers, and with a single rein and his voice he drove eight mules from the saddle. Further, his left hand held a long rope, which pulled a long iron lever which worked
his wagon. His wagon was a long four-wheeled heavily-laden,

wooden contrivance, as big as a small house, and at the tail of it trailed a smaller laden waggon without horses, like a boat astern of a ship. They tell me that all military baggage is hauled in this fashion. Here single men go hundreds of miles with such teams. I got one to exhibit: he gave one pull to his off leader and said something, and the brute turned to the right and stopped at the sound of *Wo!* like a benevolent man in the riddle. Then he gave two jerks and spoke, and the mule turned to the left, dragging his comrade, and followed by the rest of the team. Then the old fellow said, "Come up!" "Go long, Pike!" and Pike the wheeler went, and the whole edifice started up a hill on a trail of about 200 miles. We had to wait for three such teams to pass us, and then, by some hocus-pocus, our horses got out of the bushes back into the road, and hauled our stage away from a steep brink into the narrow shelf, on which we travelled to the MacLeod River. There is the salmon-breeding place, but I did not stop to see it. Two intelligent men got in. One said that they had five tons of eggs hatching. When an egg dies it turns white, and a fungus grows on it, which is apt to spread to the rest of the clecking; so two very 'pretty squaws, with black hair, spend the day in picking out dead eggs with pincers. After a time the eggs are packed in moss with ice to stop their growth, and then they are sent seven days' journey or more to the east coast to stock the rivers. The Sacramento being the most southern salmon river on this coast, the learned professor who has charge of fish culture hopes that the breed will flourish further south in the east than salmon have ever flourished before. I was glad to learn from authority that

these salmon are not so degraded as to refuse to take a fly. They are caught with the fly in the upper waters of the Sacramento early in the season, and when they come in. These which I saw were all small—about eight or nine pounds. They have enormous white teeth, hooked in the lower jaw. They are not “salmo salar,” but another kind of salmo with a different name, which I failed to catch. Now, if — wants to do something larky, tell him to come out here. In the Columbia River and in Puget Sound they catch salmon in the sea and in the brackish water with spinning tackle. The Columbians are very large. About 100 miles up from the sea at Cascade on the Columbia, and for about fifty miles up to the Dalles, the water looks like fishing, and the side-rivers swarm with trout. These are fished for, and take freely. Salmon-roe is the favourite bait. The Indians use a live grasshopper. The rivers also swarm with sturgeon, which run to 1,200 pounds. I saw many very large dead fish floating and stranded. There is a disease amongst them. At one fish, which looked as long as a boat, a family of hogs and a flock of birds were busy. There are lots of means of locomotion—steamers and railways; and were it not for 275 miles of stage, the journey from here to Victoria would be easy. I went by sea to Portland, and came back from Victoria by land and inland navigation. It is more than 1,000 miles from the latitude of the Land's End to that of Gibraltar, in which I now am, at San Francisco. A gunner would find work, and real wild work here, and in Oregon and in Washington territory. There are great heaps of birds of passage and breeding birds, ducks and geese, quail, grouse, and many species which differ from European birds. On

the mountains, there are wild sheep and Rocky Mountain goats; in the woods, wapiti and various kinds of deer. "Jack rabbits," which are as big as hares, are to be found at some places, and the whole land swarms with "cotton-tails" (small rabbits), and great grey ground-squirrels. These last they poison, as they ought to poison British rabbits. They rob the farmers, and dig holes in their fields. I saw them often hopping over each other, running, fighting, and kicking up a dust everywhere. They are large, pretty critturs, with giant tails, and the Indians eat them. But to get at all this a gunner must rough it; he must carry his all on his back, or travel with pack-horses and camp out. In some districts the whole land is a forest, with a thick underbrush of fern, thorn, creepers, and shrubs, as tall as apple-trees and tough as wire. In other tracts the ground is red dust, and the trees from two to three hundred feet high. Then you get to a desert as dry as chips, with nothing but alkali-dust, sage-bush, and grease-wood, on a flat plain. Then you get to a country of shattered land with raised plateaux and deep cañons, in which the rivers flow 3,000 or 4,000 feet down below the parched plains. On them the mountain-sheep herd with same flocks as they tell me. I saw one sheep's head with curved rough horns two feet long on the outer curve. The owner wanted twenty-five dollars (£5). I dreaded the bother of carrying them, and grudged the sum.

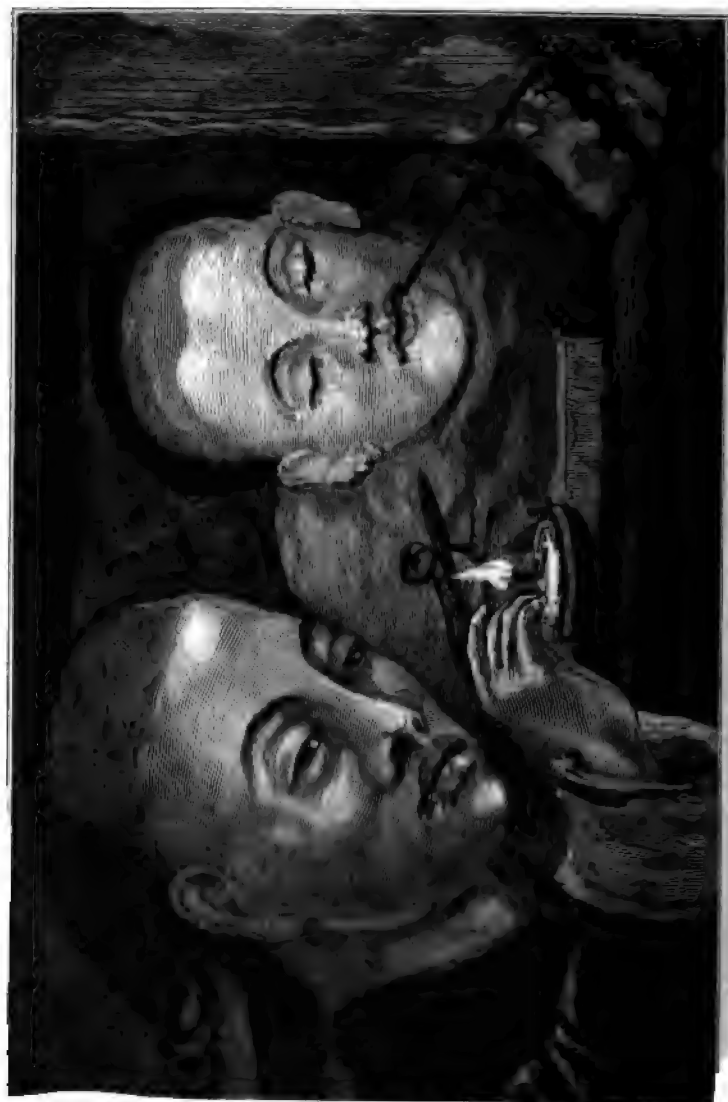
Then from time to time I came in sight of the peaks of the Cascade range. For more than 1,000 miles these volcanoes are ranged in a row: they are all of one pattern, and snow-clad, and the further north the lower the snow comes; it turns to glaciers in Oregon, and the glaciers reach the sea in

Alaska. Fancy a row of hills 14,000 and 11,000 feet high, ten or a dozen of them on a range 4,000 to 5,000 feet high, reaching from Gibraltar to London! These I have seen more or less well. Beyond, the regiment extends all the way up America and round to Japan. Say all up England, Norway, and Iceland. I am getting my mind enlarged and my mouth opened by gaping wonder, and when it does open wide I fill it with peaches and grapes and pears, the best that ever I ate, which grow here about in great profusion, and that reminds me that I have not dined. So I send you my bill of fare, and halt. Even in this Garden of Eden by the "Golden Gate" it gets dark o' nights, and it is dark now.

Thursday Morning, Oct. 1, 1874.—To the great wonder of everybody there was lightning last night and rain. It had not rained up country since May. In Oregon it rains continually. They take no precautions against rain in this queer land of California. I saw great piles of sacks of wheat by the railroad without even a cover. Some piles had a sail or something on top, but most were bare. They do not stack their crops. They thresh by steam on the ground, and leave the straw in small hills amongst the yellow dust and stubble of the plains.

I had my glass at 105° in the sun a few days ago; now it is 60° or thereabouts, and the hard blue sky is covered with grey clouds for the first time since I left Niagara. I read of great storms everywhere else. I have not seen one since July 6th, when I started. Think of that, you miserable English people who go to Norway in yachts. I have been





SKETCH IN AN OPIUM DEN, SAN FRANCISCO.

critturs, hills and dales. If you are bored I am sorry. I have no adventures to tell.

Some years ago, while there was a gold fever in the north and gold-dust was carried in the stages, some five or six broken gamblers stretched a rope over the road, stopped the coach and six horses, put a gun to the driver's head, and demanded the treasure. On the following and preceding night there were heavy boxes; on this particular night they got little. Some were run down and caught then and there. One was caught, tried, and convicted a few days ago up in Northern California. About ten days ago some fellows built a hedge of stones and bushes on the road. The leaders stopped, and the passengers broke down the hedge. While they worked, disconsolate voices in the forest roared, "Come here;" they did not go there, but went on in haste.

Such adventures do occur on the road, but none such happened to me. I saw lots of men with long pistols stuck in belts. I carried a penknife myself, and somehow it never occurred to me that I needed arms. My baggage and desk, with a lot of gold inside, have been standing about the roadside in sheds and shanties and coach-offices and stations. Nobody has noticed the luggage of which the owner took so little heed. "Do you sell dry goods?" said a worthy woman to me at Redding. She meant silks, and took me for a packman. Another lady asked if I sold my pictures; another inquisitive party asked me what I worked at. The idea of any idle body travelling to spend coin for the sake of knowledge never seems to occur to these Californians and "Web-foots" of Oregon. I am going to see the Chinese town and the opium dens before I start. I am to cross with 700

Chinese on Saturday. Most of them are washermen. I saw one at work the other day ; he projected his long lips into a bowl of water, and then he spluttered a spray all over a table-cloth, and ironed it smooth and nice. So they treat bread when they are cooks and bakers.

Now, good-by. Make people write to me in Ceylon.

J. F. C.

No. XX.

TUESDAY, *October 6th*, 1874.

"GREAT REPUBLIC," AT SEA,

Lat. 136° 38' N., Long. 133° 15' West.

MY DEAR MOTHER,

On this day last year I was within a short drive of Tiflis, about 4° further north and 255° east of this place. This is not my former experience of October weather. My thermometer is at 75°, and the barometer at 30·800, sea smooth and quiet, clouds in the sky. If only this will last, we shall do. This ship is 400 feet long. The saloon is forty yards measured. My cabin is a little room with a two-foot square window opening on the deck and looking over the south sea. I awake to look at the long-winged birds who have followed ever since Saturday, and are backed to follow us to Japan. How they would rejoice the heart of the president of the flying society ! Tell him or send him this to read if you are too lazy to repeat my chatter. These critturs are a brownish grey all over, with black tips to their wings, and white about their cheeks and whiskers. Their wings are long and very narrow. They look like swifts in some positions but they must spread near four feet ; they give out a humming sound when they are in motion, and sail about

crossing our wake at a wide swing to return, sink and rise, and wheel like a man doing outside edge. They have long legs, which reach far beyond the tail. When some tit-bit of fat catches the eye of a bird and tempts him, out fly the webbed feet as a rudder, the tail spreads, the bird turns short on his pivot, then down he stoops, out go the legs to stop his way on the water, up go the long wings to keep them dry, and then it is all gobble and squeak. More join the first, and we go pounding on, while they dwindle to specks on the blue sea and vanish. There seems to be an end of their travels, but in ten minutes there they all are again, some within a couple of fathoms looking me right in the eyes over the stern, the rest swinging and wheeling as if they had not flown a mile. They had flown 431 miles with us to-day at noon, and they must have flown a thousand at least on their own devious course.

The sea lions and seals also amused me greatly. They haunt a rock outside of the Golden Gate opposite to a bar-room and hotel called "Cliff-house." The State of California has passed a law for their protection. They bark like a pack of foxhounds, and look like great mastiffs with paralysed hind-quarters. They have long flippers in front, and they walk up the rocks growling and howling and barking at each other with open jaws well armed. One favourite pose is to get astride of an edge of jagged rock with flippers on each side, and point the snout at the zenith. That rolls up the fat behind the neck into a pleasant head-rest, and there the big brutes rest till some other comes near, when there is a row. Meantime their wives and families lie at length and sleep like logs or hogs, or sacks or pillows or leeches, or anything else that is

black and soft, and fat and shiny, and still and sleepy. There is a great herd of these *protégés* of California, and lords of these seas. On the tops of the rocks gangs of pelicans congregate, looking strange and grey, and in other places black flocks of cormorants and white gulls sleep under the protection of the sea lions and the State. So near a great town I never saw such a congregation of wild creatures till last Friday. I drove to see them with four Englishmen, one is on board—"a globe-trotter" like me; the other three have gone east. There are Germans, a Dane, a Frenchman, a Chinese, Scotchmen and Americans, Irishmen, Japanese, and a lot of pleasant quiet people, who seem to enjoy life placidly now that they cannot rush about and worry themselves and their neighbours in pursuit of rapid gold.

We have a number of fair ladies on board, and our society is a kind of marine club. The whole crew and waiters are Chinese. They are steady, quiet, cleanly people, active and busy, and all the officers are loud in their praises. They never get drunk or give trouble, and they never shirk work. Practically this ship is a model of cleanliness, order, and discipline. What she may turn to in bad weather remains to be seen, and I hope I shall not see it. My chief ailment is that I scratched my ankle with a "Toxico dendron," or poison oak, some days ago before I left Oregon. I took no heed, but the scratch grew to a thing as big as a dollar. It is curing, and will be all right in a couple of days. But some people get badly poisoned by coming near this poison oak. It grows all over the States, chiefly in California. I have heard of it till I came here, and now that it has



again. The brute looks like an innocent holly, and is said to be worse than the Upas tree. My cure is a bath that is in the paddle-box with a window a yard square. It is filled with fresh Pacific water, and I roll therein like the sea-lions of Cliff-house while I watch the birds. Now and then a whale blows. None of them can enjoy the air and water more than I do in the early morning. That mixture of sunshine and freshness and cool warmth is not my experience of October weather, and I doubt if it is yours over yonder in misty England by the fireside.

Now I must go, walk the deck and smoke, for the third dinner of the day will soon be on the table, and I must eat curry and rice and Bombay ducks. My walk on deck was varied by fire-drill. The steams whistled a roaring blast, and two Chinamen, grinning with excitement, got out a hose and pump and pumped hard at the stern. Meantime greasy-faced cooks—black, yellow, and white—and gangs of Chinese sailors and Yankee officers swarmed all over the place. The engineers opened valves, the stewards hoisted extinguishers on their backs, and in a few minutes a whole gang were spouting sea-water into the sea over the starboard bow. Then an officer with a big pistol slung to his waist, trotted to the wheel-house and blew a steam-blast. Pails of water were replaced, hose and extinguishers were carried off at a trot, and all hands went to the boats. In ten minutes more these were off the chucks, slung to the davits ready for lowering, crews seated, with oars tossed and provisions on board. Then the armed officer blew another steam-blast, and all was replaced, and we went to dinner. The queer mortals of that crew I shall not forget. There are not boats

enough to hold the half of us, and the nearest land is in the Sandwich Islands, so all this parade was bosh; I know that, but it looked well. To-day, Wednesday, the sea is smooth and the sun hot; the barometer is at 30.900 and thermometer at 75° in my cabin with door and window open. We have been smoking and fraternising and exchanging knowledge, and truly we know a good deal amongst us. The Irishman knows a good deal about oil, and he is communicative. The Frenchman was director, or agent, or manager of a fur company; one is a banker. One German is an Austrian baron, related to everybody and overworked. He is bled regularly once in three months. Yesterday he lost twenty-four ounces, and to-day he is much better and nearly white; he smokes and is quite cheerful and proud of his headaches. We have three pretty, young American girls bound for China to be missionaries; two female doctors, of whom one is young and pretty; a couple of missionaries with wives, who speak different dialects of Chinese. Since the tower of Babel went to sea in the ark, there never was such a lot of globe-trotting polyglots afloat.

Now I must go and do something. Latitude 36° 13' 50" N. longitude 136° 51' 24" W. Run since last noon 174 miles, eight revolutions to the minute. All serene. O. K.

Monday and Tuesday, Oct. 19, 20, 1874.—Perdidi diem.—I have lost a day. Yesterday was Sunday, 18th. About the middle of the night we passed the meridian of Greenwich, 180° W. It was noon to-morrow morning then with you. In order to get right when we get to China, and keep right all the way home, I have lost a day. Unless I go round the world once more, I shall lose another birthday. Amen. I

can afford to drop one, having so many. We have been out sixteen days, and ("in good time be it written") I never had so pleasant a cruize. The sea was rough enough once or twice to show what a good steady vessel we sail upon. The roughness was queer, cross, and local, and seemed to mean gales to the north; so our captain got south a couple of degrees gradually, and here we have been in summer weather ever since. A Thames outrigger sailing boat might navigate the Pacific hereabouts, it is so quiet and still. Every morning the English crowd bathes in the paddle-box establishment; an occasional Dutchman takes a plunge now and again, but we are regular bathers. Every morning the decks are washed and the brass is polished, and the ship is brought to a state of shining neatness by the Chinese crew. When a sail is to be set or changed it seems to be done with the engine. One night all the sails in the ship were furled at once while we were smoking in the room on deck. Not a sound was heard. There was no swearing, or whistling, or stamping of feet, or "Yo ho." A lot of silent Chinamen quietly furled and stowed all the sails without our knowledge. No yacht that ever I saw can beat this *Great Republic* for neatness and comfort, and this Pacific October weather is a fine English July. Thermometer 75°, fresh cool breeze blowing, latitude about 33°, corresponding to Madeira and the Delta of the Nile. I believe that we have got 700 Chinamen forward. I am going to look at their quarters with the captain. Now and then a couple of hundreds are sent on deck to be aired. They instantly form groups and gamble. I sit and watch them with great interest. One of these steerage passengers is a very rich merchant; he has

got a heavy pile of dollars below in the steerage-room. Another couple of curious creatures came on board to die, and to be carried home to China and there buried. Every coolie makes a contract that he is to be carried home dead or alive. Two poor fellows acting on this principle came on board very ill and died soon after we got to sea. The doctor proposed to one of the female doctors to come to the embalming, but she would not. A third Chinaman has gone crazy; he tried to jump overboard, and now he is in irons forward. There are three She-Chinese forward who came on deck, sat together and played dominoes by themselves. There's a whole family below. The first-class ladies will not appear in the saloon because they cannot have their hair properly done. I see them down a hatchway sitting alone in chairs. The man who is very intelligent shows it by not appearing where knives and forks are used. He feeds below, and does not appear on deck. The Japanese, on the contrary, act and dress, and eat and behave like western people. They speak good English, and I have taken a liking to them. I have begun Japanese, and have got as far as 1,000 and "give me." The birds are with us, and a constant amusement. According to the wind, so are their manœuvres. When it is calm they have to fly hard, when it blows they progress by falling and rising. When the wind follows us, they sweep down wind, turn and rise crossing our wake where they hope for food. When the wind heads us, they head the wind and swing. Manifestly it would need very little power to fly if the captain could manage his engine as well as these birds do theirs.

We are in the Sargasso Sea, and the birds are brought to

see lots of drift-weed. Except a tiny morsel which joined me in the bath one morning I have seen no weed at all. Somebody saw a flying-fish this morning. Nobody pretends to have seen a sail since we started, except about the Golden Gate.

I have just returned from inspection. I have seen the dens of 700 Chinese and as many yellow men and women. We have forty ladies in the steerage it appears; all that I saw were like black-haired brown baboons. They would spend all their time in their bunks but that they are smoked out with red pepper daily. The whole ship was as clean as a new pin, with all ports open, and fresh air in abundance everywhere. In one place made of batons and sail-cloth we saw the opium-smokers of our crew. They were in the usual state—brown bundles of humanity, with legs and arms sprawling about in helpless drunkenness. One or two were awake, roasting their opium in the flame of a lamp to get it into the bowl of a pipe preparatory to a whiff. Chinamen never get drunk they say. Some smoke opium instead, and I guess they are not pretty when they do.

The majority were gambling busily and as bright as bees. But after inspection I find that we are under charge of about a dozen of white officers and petty officers. Of these the most important is a Scotch Canadian, with whom I fraternize at dinner. He is very like the governor of the Isle of Man. He was very ill at first. Another officer fell down a hatchway and broke some ribs; so two are off duty. The captain himself was off duty for two days with Panama fever. So we are chiefly under the care of "heathen Chinee." In this weather it is all right. In bad weather I should prefer Jack Tar

"Rule Britannia," &c., "Britons never," &c., "Shall be slaves."

I am getting patriotic as I get round this world after losing a whole birthday in the deep, deep sea. I have been spending my days in writing a paper on Glaciation. The subject is getting old like the author, but I have taken in a lot of knowledge since I started. Everybody is hard at the pens and paper, so I shall stop and post this thus. It is about half-past eleven on Monday night with you. It is about noon on Tuesday morning here, and yesterday was Sunday. Good night or good morning.

J. F. C.

No. XXI.

To a Scientific travelling Chum. From the Antipodes.

MY DEAR —

I am not quite clear which of us is standing on his head or on his heels. The land I have left and the land you live in still are quivering with spiritual and spirited scientific telegrams; and the land I am steering for is vibrating with the same thoughts which quiver here through this "Great Republic" and you and me. We are very far out at sea. Here is an epitome of the world. Here we have mischief and missionaries, men and women, peace and war, opium and water and grog, dreams drunk, and sober senses, male doctors and female mind and matter and delirium tremens, physic, physics, and metaphysics. Dead men and alive, and ghosts, and things that go bump in the night. We have sacred

beer, content and discontent, and that ostentation which gives a French name to tripe ill-boiled by a blackamoor. We have shams and facts, an engine and a driver, a captain and a crew. They are making eight revolutions every minute at your antipodea, taking us all westwards to the far east against the way of the world, slowly ahead, but faster than the material world can carry us astern by about ninety miles a day. We are going to make more revolutions soon. The engine-driver has just told me :—we are going to make more when we arrive. I need not tell that to you who fought in the opium war. We are going to spread the philosophy of “Try-and-can-do,” to run an assorted cargo of nations and notions, of good and evil, to blow up the Celestials for their sins, and to knock them down if they will not listen to our young ladies. We are going to extend the right hand of fellowship, and to fill it—honestly if possible. We are going to awaken Buddha and confute Confucius by turning everything eastern, and everything under the sun heels over head if we can. This world revolves on its own axis eastwards once in twenty-four hours, subject to the constitution of the United States ; and this “Great Republic” is carrying westwards a small army of martyrs, merchant princes, and republican monarchs, to meet the kings of the earth and the autocrat of all the Russias, and conquer the universe against the grain. We are going to look at the transit of Venus in Japan, and to survey the ports of Northern Asia. But here is Venus *in transitu*—a passenger and a mediciner and a missionary, and I wish that I was very unwell or a heathen Chinee.

In letters left at the pastrycook’s, Miss Sharp being called on for a remark, observed, “It is a remarkable thing that

the tortoise, which provides us with such beautiful combs, has itself no back hair." It is a remarkable thing that many missionaries should be provided by a people lacking in churches; it is remarkable that male missionaries from Utah should convert many Christian women, while Christian women pass Utah to convert the heathen Chinese. It has often been remarked that young women teach their grandmothers. Here is young America going to teach old Asia. It really is remarkable how pretty a great profusion of fair hair looks when properly arranged with a tortoise-shell comb, especially when love and learning look out of the clear eyes of a young American M.D. It is remarkable that mediums should be ignorant of the price of gold. It is remarkable that you and I should wander so much and pick up so little worth having. Do you remember how you looted a joss-house carried off a pocketful of gold-dust, analysed it on board of your man-o'-war ship, and found that you had got yellow iron and sulphur out of the heathen Chinese? All is not gold that glitters; some back-hair is a chignon; sharp eyes need spectacles, and mine are very dim here at sea. I cannot see where we are all going to; but "I want to know." We seem to be going ahead to the bad, and coming to the good round about.

In the clear atmosphere of intermediate American States on the coast behind us people see further into space than you do in the old misty world in which you are. They have the aid of mediums—spiritual, spirituous, and astronomical—wherewith to solve problems, and they are free. Let our kindred souls vibrate in unison with the free from the anti-
 (es ... next ... not ... time and space to free

minds? You, a disciple of the mighty Kant, will understand that. Above all, let us be philosophical at sea.

If kosmos be a fortuitous concurrence of atoms, it would be well to study atoms in the abstract to see how they come to combine in the concrete. But if the desirable be unattainable, the possible must suffice. If you can't get a thing, you must do without. There is the philosophy of "Can do" and the philosophy of "Cannot." If abstract atoms, unattainable and indestructible as they are said to be, have fortuitously concurred in protoplasm which, having nucleated and budded, lived, and has developed through seed, plant, and living organism to that great humanity which from Ego and enemy has evolved the friend, the family, and society out of chaos. If we accept the possible, neglect the unattainable, and admit the undeniable, then a study of an intermediate atomic state in Oregon and of individual entities which have there loosely combined to be firmly joined to a larger concretion of States, is worthy of a student of the interminable like yourself. I know that some have thought themselves out of their identity; let us think together again through the world, though we were unable to travel round it together as we both desired. May you enjoy that repose which is denied to me, tossed on this ocean by the sea and by scientific arguments in the midst of tobacco reek. That which is patent to the student's eye, even in this haze of obscurity, is not an exhibition of Anglo-Saxon energy or of Celtic fire in America. It is not something divisible by the quarters of the globe, so that a scientist can affix to it a technical nomenclature appropriate because geographical. It is neither "Eurasian," nor "African," nor "Columbian." It is a Cosmopolitan movement. The intermediate

Oregonian state is not an ethnological phenomenon. It does not spring from the special energies of separate races of men, for it is neither Aryan nor Turanian, though it partakes of both, and is also African and Semitic, and aboriginal and autocethenal and original. It certainly is not a religious movement, like the Crusades, which had a motive. It is exceedingly *not* religious, and sends Mormon missionaries to make heathens. It is not the ambitious of conquest monarch's move, like the march of Bacchus, or Alexander the Great, or of Russia eastwards, on India or China or Japan. It is not a march under leaders. It is a general skedaddle of mankind in the old Scotch sense, which meant the overflow of fluids from ill-directed energy. It is not a mythological result of solar worship, for that ancient form of Aryan mythology lands us all in the deep sea at sunset. The teaching of Buddha had nothing to do with restlessness. His is the philosophy of "Have-done." The followers of Confucius come eastwards only to earn gold like Christians. Apparently there is no leader and no guide and no one master, where all are autocrats. Theirs is the philosophy of "Must do." The only ruler is Public Opinion with a revolver, and the rule of life seems to be the revolt of "Won't" against "Must." It seems that I am watching the crystallization of small atomic concretions to form a larger body by the attractions and repulsions which drag and drive humanity like other gregarious things, and which tend to combine all men in one great future coming United State according to some philosophers here. Theirs is the "Go-a-head" philosophy. The abstract atom and its earliest combinations cannot yet be reached by the combined energy of any united though

parted duality of individual minds, even my uncombined solitary Ego sees with bodily eyes, which are dim, that the intermediate Oregonian state is *not* a fortuitous concurrence of individual men. I can see them; though the fortuitous atom recedes into space and eludes my grasp. "Don Fernando cannot do more than he can do." There is law and order in this human crystallization, and there is design to do. The laws of England are Reason, according to Blackstone; they are the wisdom of many Anglo-Saxon and other generations who have agreed to obey when they cannot resist. By common consent of mankind, laws which became the laws of England now are subject to the constitution of the United States; and these, thus strengthened, are resisted as much as possible in Oregon, as they are in London or in Paris, to which earthly paradise it is here said that all good Americans hope to go. The law of the strongest everywhere prevails. That law prevails in this intermediate state, which I can examine without a telescope. I need no microscope to see that law is obeyed when it is stronger than those who ardently desire to break it and to be free. I notice that the free carry revolvers and big knives in greater abundance in proportion to their freedom from those ancient fetters which eloquent orators denounce in Chicago, New York, Dublin Hyde Park, Paris, Petersburg, and elsewhere. I conclude that the law of the strongest governs early human crystallization as it governs material nucleation, and that the force is atomic and universal in a material sense. An old rock crystal is harder grit than smashed ore and mercury, water and sand. An old State is stronger than a new Territory or a single man. Abstract laws have less power in weakness

because less matter to act upon. Therefore, sing "Rule Britannia," and "God save the Queen," and stand up for our old Constitution. Whatever be the origin of this fundamental law of the strongest, manifestly it is good for unruly men and minerals, and it is stronger than either. "Atoms" want to scatter, but they must combine. This is law in Oregon and on board ship, and all round this world. We all want to mutiny, but we cannot. I cannot understand a law without a Law-giver; or the philosophy which we read here, and talk by the captain's leave. "*No Sabe.*"

There is deep human design in the making of rich human amalgam on the shores of the Pacific. That is patent. That which is latent I may perceive, but I cannot see. Men who want to buy land cheap and sell it dear need wastes and wilds and customers; those who make shoddy need fools. So clever men come hereaway, and set traps in the wilds for men with money, and for men without much money or brains, who are aptly styled "hands." Those who want roads made cheaply for their own ends need many hands to fight each other and struggle for leave to earn small wages by hard work. These heads of the people set their wits to devise baits for the grasping. A great many dollars a day, a diamond-field, or a golden river or a mine of coal, or some other bait, is set by these trappers in the west; and bulls and bears hungering for shares, zebras, which are uncommon asses, lame ducks, and stags and human herds, rush to the attraction like iron filings to a magnet or horses to halters when they come for corn. We want to dinner, but we cannot get out of this ship. Our hands are bound, but we must obey the President. Once over the water, the great migratory mortals cannot call

get out, being in a dilemma between the Devil and the deep sea, Brigham Young and the ocean. They are trapped ; they are caught. Like gold-dust with mercury in a pan, they must amalgamate, and they must work to live. So grasping hands enrich other bodies than their own who have designing heads ; and the growing State grows because of the strong "law" which is stronger than the strongest. They *must* do what they don't want to, and they *cannot* do just as they please. Call it Fate, Necessity, or Atomic Law, it is a fact that men have been drawn to the West by baits, and there do what they did not intend. There is no repelling force strong enough to drive men away ; there is no equal attraction elsewhere. Individuals may be drawn back by love of their kind or their country, but the migratory flocks remain. Web-foots and the ugly ducklings of Oregon will turn out swans by the practice of the "Can-do" philosophy, subject to the "Must." The units were repelled by starvation, or by a policeman, or by bigamy, or an injured sea-captain, or by German gunpowder, or French fires, or Italian unity, or Spanish solution of continuity, or by Scotch sheep which are better than Celtic men, or by negro slavery, or by overcrowding in Asia or in Iceland or elsewhere. Somehow men were driven to wander, and drawn into a good place ; they had energy enough to get in, and they lack a motive for escape. Those who have been repelled or expelled by one set of forces and attracted by their opposites, amalgamate, marry, and crystallize into families and congregations, and then into societies. Hands make roads and buy lands at high rates from those who baited traps and designed the schemes of "land-jobbers." Hands come and work. Heads raise themselves and lick up the plunder. All looks like

selfish, independent freedom from law. But that is not so. Society grows here according to ancient laws, which came to be English laws before they came here. It grows according to a law which governs mankind in spite of themselves. The trapped Aryan Radicals, whose capital is their four bones, become Protectionists, and resist the importation of cheap Turanian bones and dust from China into America.

Radical Protectionists, stumping it at the Reformers' tree in Hyde Park, loudly demanded that those proprietors whose capital was in their pockets, or invested elsewhere than in four bones, should be taxed in Britain in order to raise the value of living bone-dust there, and to lower it here by the exportation of Aryan "hands." Hands here, on the other hand, protected themselves by the strong hand, clenched themselves, and dashed wildly against the yellow-faced hordes of China. Hands made for grasping grip the throats of their rivals here as elsewhere, and struggle for existence as paws do in the woods, and beaks and claws. But we have one head to prove that it is worth twice as much as two hands, and four times as much as four bones. Heads here have the uppermost, even in this state of revolution, but only because their small schemes are better designed. It all looks heels over head; it is "Head" over heels. It looks like a back-somersault; but it goes round with the world, and goes ahead. There is a rising scale of intelligence, and a rising scale of laws so far as I can see and understand. I cannot see why that scale should end with my powers of comprehension. Here is a case. Heads who had risen high enough to see over the Golden Gate at San Francisco passed a law to protect the interests of the people of the United States from the interference of the

Hands. There was a great deal of talk about slavery. Longer and stronger heads that had risen higher on benches at Washington pronounced the State-law illegal; so the stronger law opened the western door just wide enough to let in hands wanted to open the way from Washington to Yokohama for my especial benefit as a globe-trotter, and for the conveyance of my mails.

But it was said that these Chinese males wanted mates, and a cargo of China women arrived a short time ago at Frisco. A great deal was said of their extreme wickedness, and the Aryan heads of this people put the yellow ladies in prison, though Brigham may import Welshwomen and Sætar girls from Norway freely, according to that law which is locally strongest in his Intermediate State. There is no lack of housemaids in Utah hotels, and they have to work. The Chinese ladies, by their importers' advocates, appealed. The next revolution of this strange world brought Eastern wisdom to the West from Washington, and the strongest hands in the United States opened the prison-doors and let out the yellow girls to cheapen the work of female hands and helps. They are apt to get the upper hand of their employers in this Republic, where women are scarce. A good-looking Irish girl gets married to an Irish hodman who has made a large fortune. Is any other good-looking white girl going to sweep for her? Not if she knows it. "No, sirree, you bet, unless she is well paid. The wages we have to pay our helps, sir, is dreadful. My wife, sir, does all my cooking." A great deal was said about the wickedness of the Chinese, and female slavery; and about the cruelty of putting the Chinese girls into prison. The bird of freedom flapped his wings and

crowed a good deal when they got out. That was "bunkum." The real question was Free trade or Protection for the working man? and capital won free trade in the interest of society. Henceforth Chinese men, women, and babies, will help to cheapen the labour-market unless the Eastern wisdom of the Scoto-Irish Egyptians drowns them. But still there is a remnant of protection left. Chinese wares, like opium, are forbidden. Only those who are citizens of the United States, or Europeans or Africans, may fertilize their new country with their bones. Dead Chinamen must be exported to China under bond, and we have a cargo on board. There are wheels within wheels in this ship, and laws over laws on shore; but the laws which men call political economy are stronger than any of them. Those who can buy will buy what they want if they can, and those who can sell, will take their cattle to market.

Rich American masters want servants, and mistresses maids; China can supply the market, and all the hands in California cannot shut the Golden Gate against the law of the strongest. The heathen Chinese is awake, and very wide awake, to his own interests, and his fate sends him to meet the morning, and those whose lot it is to follow the setting sun. The Western States grow like a grove of big trees, heads uppermost, heels on the rock, in spite of themselves and in spite of storms. Men may rebel against the fetters of law, prey on each other as much as they can, and struggle for the freedom of the Oregon trapper to do just as they please. Each free man seems to be triumphantly singing in his
own key

"I am monarch of all I survey,
My right there is none to dispute,
From the centre, all round to the "say"
I am lord of the fowl and the brute."

But somehow I see that "Law," which is said to be "Reason," masters unreasonable heads, and rules unruly hands, not by general consent of mankind, but in spite of their united efforts. Gregarious men join hands and lay their heads together; they amalgamate and crystallize like law-abiding chemicals, and States grow here according to law like trees, or like Shasta and Rainier out of seeming chaos. In spite of unruly human entities evolved out of fortuitous protoplasm and atoms by philosophers at sea with me, the great Republic grows, and this bit of it steers under command of a captain. Here they are, black spirits and white, red men, yellow and grey, mingling as they may, making themselves into a new body in spite of themselves, under laws which govern the growth of nations even here out in the far West, and out at sea. The battle for life, the struggle for selfish ends, goes on between Ego and enemy, man and man, State and State, East and West, Foe and Law, under the flag of the great Republic. Republic and Rival struggle politically, and they all seem to aim as we do at Japan. Hands grasp round the world, and heads scheme for their own corporations, and the strongest gobble up all they can grasp. But somehow, they all do work which they did not design. "The world revolves on its own axis once in twenty-four hours subject to the constitution of the United States." Under that law, a "hand" with a head grew to be a millionaire, and forthwith he provided funds for a bigger telescope than ever was made, to be set on a

higher hill, in clearer air, to try to see out of this State to the end of infinity. It needs but eyes here to see that this sky, aglow with stars, has deep depths, and more in them than atoms and astronomy. "Men who are not of the superstitious sort, who believe in Divine Providence, think in California that there's nae God Almighty to see them west o' these mountains; but there is." So one said to me who had taught that lesson in a Scotch school. I see that human is law here at work, and selfish human design. Above it all I see a grand growing human growth which has become a community of western States on the Pacific since I was a grown man. I have not second sight, and cannot imagine what that sapling will grow to, but it is a big thing:—and God's law is bigger.

Peripatetics needs must have some kind of knowledge driven into their heads. unless they be hands devoid of understanding. It has been driven into me that law proves some lawgiver, design a designer. But no human being ever designed a *sequoia gigantea*, Brigham Young and Utah, or the intermediate State of Western America, and no man or medium can divine what it will grow to under strong laws which never were designed by man.

Now, my dear —, I never doubted my own existence and denied that of matter over a good meal, as you commonly did when we were young. Because I eat, I live, and so do you. *Cogito ergo*, I am yours in the fraternity of MacFarlan's geese, who liked their play better than their meat, and were migratory fowls like you and me

"I am geese" For a while

BLACK PROST

No. XXII.

"GREAT REPUBLIC," AT SEA,
Sunday, October 25th, 1874.

MY DEAR MOTHER,

It is Saturday at San Francisco, and somewhere about early Sunday morning with you. Here we have just had our third church, and we are about to have our luncheon at noon, on our Sunday. We are about latitude $32^{\circ} 3' 0''$, and in the Japan stream. When I get into my sea-bath of a morning I can hardly persuade myself that it has not been warmed on board. It is about 80° ; so is the air, and this morning the wind is southerly and damp. So here I sit in a kind of hot-house damp mist, writing to a land where people are shivering in cold fog. I am not used to this sort of October weather, and I cannot quite get rid of wonder yet. Our friends and followers, the long-winged Gonies, are with us still. If they be the same birds they must have flown 40,000 miles. We have sailed near 4,000, and they fly ten times as far at least. Further, some flying-fish have begun to appear. I have not seen them, but others have. With these exceptions, not one living thing have we seen since we left the American coast, and not one solitary sail on this great blue ocean in three weeks. There's nothing to write about, unless I describe the people, and about them there is little to tell. My chief interest is in the Japanese students, who speak English more or less well. From them I strive to gather insight of stories. I find that my favourite "dragon myth" is known in Japan; and, please the pigs, I'll get it before I leave the country. But striving is vain in this climate; my exertions end in another cigar and another

meal, and then at nine I go to bed and get rocked to sleep by the Pacific and the Great Republic. A very charming lady saw me somewhere on shore, and to her son she said, "My dear Tommy, you have often wished to see a trapper, There is a trapper." But she afterwards did me the honour to make my acquaintance.

Our missionaries have a daily Bible-class, well attended, and one of them preaches really well, and is a gentleman, "Number one Joss-man."

"By the Jimm hill!" said one passenger, "when I was at Sitka a set of fellows used to come into a place there, and tell yarns fit to make a pig sick." Feebleness, idleness, sloth, and good manners, all failed and went with a run, and everybody there present roared and laughed and yelled in chorus. The passenger stared. Then it dawned on him; and then he laughed and roared like Boreas his prototype. I was quite tired with my exercise, and went to bed. The worthy man had done nothing but tell new and old stories for three weeks; and they were not sermons.

Last night it was proposed to celebrate our last Saturday on board by a glass of grog "to Sweethearts and Wives." The liquor was horrible, so I escaped. The rest, or some of them, sat up and enjoyed themselves till the lights were doused at eleven. Then two agreed to have a parting "cock-tail," so they reached down glasses from the rack, and filled and drank. Then, as it seemed to one, the other was taken with a dread sickness. He had taken a tooth-pick glass by mistake, and his throat was full. A Porcupine is to be the emblem of a passenger's "cocktail" henceforth. "Grog a cure dents" is the motto of the missionaries.

fell foul of an incredulous man, and he fought : at last they came down on him, male and female, in such force, that he had to get up and escape on deck. He came to the smoking-room, and I got a blast of his doctrine. But these are rare incidents. With few exceptions we are too lazy to do anything but eat and smoke and sleep. So now that I have written these four pages I must go and recruit exhausted nature with soup and a cigar.

Tuesday, 27.—We have signed a letter, which I drew up, thanking captain and officers for distinguished courtesy. What a place for tittle-tattle and rows a ship would become if the voyage were long and passengers human.

I and my pipe have placidly passed the time, and I really begin to think that I shall be sorry to land and begin active life and the hard work of amusing myself. I wonder if I shall find another *Times* of October 1st when I get to Yokohama, or even a letter or two at the Oriental Bank. If all goes as well as it has gone I hope to know in another day. So now to finish off my various jobs, and pack up and make ready for land as soon as I see it to sketch.

Wednesday, 28.—Last night about sundown a bird came on board and perched on the crosstrees. We were 200 miles from the nearest land. A boy and a boatswain shook a rope and the bird flew off,—he was a strong flyer, a hawk. The captain fired a revolver at him, he took a turn or two and came back. Then a Dutchman got a Spencer rifle, which fires seventeen shots in succession, and he missed the hawk. The hawk was the better sportsman; next turn he had a long-winged bird about as big as a swallow, with webbed feet clutched in one claw, and with that prize he sat on the

gaff, where the Dutchman missed him again. I left them at it when dinner was served. Accounts vary; some say that the hawk was slain. I have not seen his feathers in the cap of anybody. But how Mr. Wallace can hold that a narrow strait will account for different tribes of birds separated by geological Darwinian periods of time beats me. Here are two birds 200 miles from land. I have met shore-larks on the Atlantic between Shetland and Farøe, and I don't believe Wallace. As the German said "I do not agree with Paulus."

The mail closes at one. Breakfast is ready. The weather is cloudy and cool and blowy, but fine; and we hope to land to-night or to-morrow morning. I will send another letter from land. This has to go east, and will take 40 days. Good-bye.

P.S.—*Wednesday, Oct. 28.*—Finished copying the surface temperatures taken at 4, 8, noon, 4, 8, midnight, 4th and 28th October. Made a diagram, and copied it for the captain. About lunch time came another hawk. A German Californian hunter put a bullet through him, and he fell from the crosstrees on deck; he was a fine, strong, ash-coloured brown falcon, measuring three feet from tip to tip. When he fell, two pretty little birds, like finches, perched on the rigging, and rested, and looked down on the prostrate foe. More came later. So the land "battle for life" is fought out at sea by birds, and men being stronger slay the slayers. Soon after the Japanese cried out the name of their country. and there it was a long way off on the horizon. Run at noon ninety-one miles 47° in all. Went to the engine-room and fraternized with the crew. Sabbath morning. We are in Canada.

and speaks Gaelic. He is a very clever chief engineer, a Californian, and remarkably like the governor of the Isle of Man. If we Scotchmen joined hands, I believe we might dance round the world. We passed an island smoking in the sea, and made out Fuji in a sea haze. In shape and size it closely resembles the Oregon cones. Anchored at Yokohama about eleven at night.

Thursday, October 29.—Heavy rain all day. Landed and wrote letter home. Lat. 35°26' N.; Long. 139°29' E.

APTERIX.

No. XXIII.

YOKOHAMA,
October 29th, 1874—30th, Friday.

MY DEAR MOTHER,

Since I first landed in a foreign town, to wit, at Vigo, in 1841, I have not been so much amused. We got in by fine moonlight the day before yesterday, and I slept on board. The harbour is full of men-of-war, English, American, Russian, and I believe French.

The French and English have a camp and barracks, and the sentries meet in their walks, and converse in Japanese. All night long we were sending out cargo from the *Great Republic*. I could hear the song of the Japanese boatmen. As soon as I could see I was out, and then I found a regular deluge falling. It fell all day yesterday, and consequently all the world were in waterproofs. The boatmen looked like animated sheaves of corn. Their rain-clothes are rushes, and their hats straw. Ten or a dozen, singing, swung like an irregular pendulum, with action as hard to catch as the walk

of Miss Thomson's horse in the "Roll-call." Their oars, bent at an angle, never rose from the water but sculled under it, so that the boat looked like some hairy, rough sea dragon swimming with a dozen arms. "Hou hai, hou hai, hou hai!" and on they went through the rain and the waves towing loaded barges. After breakfast, and a good long wait for the others, an Irishman and I hailed a small hairy dragon with two legs, and down we scrambled into a "fune." The bowman was like a brown ape, and sang, "Imir su, Imir su," which was very like Gaelic. The stroke was a brown Japanese man with marvellous muscles, and a "rashen coatie," and off we went into a considerable sea. We got through that, and got our goods on a pier, and then we got coolies who trotted off to the custom-house, and after that to the Grand Hotel. Gas, and pavements, and English grates, and French dishes met us, and we feasted high and merrily. Then for the rest of the day I wandered about in the rain gaping like a greenhorn. Every man, woman, and child, and tree, and fish, and dog, and house, and fowl, was new and strange. They carried paper umbrellas, like those which you have from G. W. R., but grander and bigger, and gorgeous with colours. They walked on wooden pattens, their heads were shaved into patterns, their hair was twisted into horns and devices, and stuck full of pins and ornaments. They grinned and I grinned, and we got friends. Two-wheeled carriages with hoods of yellow paper drawn by coolies were everywhere. Sometimes a fine lady, sometimes a Jack-tar sat inside; sometimes a bearded Briton, sometimes a Chinese. Everywhere these marvellous coolies went about in the rain, and through the rain showing legs that

would have made a chairman stare. Seventeen of them charged our party at one place, all grinning. Then we got into the curiosity shops, and I began to use my slender stock of words with success. Then I got out my pencil, and presently I had an audience of shop-people grinning, chattering, and charmed. Then we got to a bridge and watched the fisher-boats going out to sea. Two men in a boat were casting a net after the Thames fashion, but better and bigger. Then we heard the railway whistle, and then the bugles of the marines. There never was such a strange mixture of East and West as is to be found in this strange port. Since Vigo, I have not been so much diverted. I went to the bank with a pipe in my cheek; I pointed to it and looked for leave. "Can do," said a Chinese clerk, so I "did"—smoked on. I produced my letter of indication, but there were no letters for me. Now I am waiting for — to go to the Embassy. I believe that somebody was to write to Sir H. Parkes. We shall see; anyhow, I am content. No theatre ever was half so amusing as the street. The sun has come out, and it is bright as summer, and warm. Camellias are blooming in the gardens. Men are selling breakfasts. Men as naked as Adam are rowing off to fish, pumping water in the back yard, and going about their work unconcernedly. The housemaid is a man in black tights, all over curious worked designs, for all the world like a demon in a pantomime. The waiters are all imps like him. "Petits Diablotins," the Frenchman calls them; and here I sit writing amongst them as pleased as a child at his first play. Now I must go stare and make pictures mentally.

Sunday, Nov. 1, 1874.—After my Friday letter I wandered

about with a good Scotch lad who has put our names to the club. I left my card on Sir Harry Parkes, and now he has left me his, and asked me to dine on Wednesday. Athletic sports were going on somewhere, but I do not care about them here, so we wandered on the racecourse and looked at horses. I was more amused by the natives. Sometimes we got to a garden with dwarf trees and Japanese plants, and pots and rocks and dragons; then to a shrine hung with strips of inscribed paper; then a crow croaked in a strange voice; then a duck's wings whistled; and then the sun set behind Fuji-no-Yama, and we wandered back in the dark amongst paper lanterns, and curious people seen by their dim light. They were buying and selling and eating fish fried and strange fruits served in Japanese dishes, chattering like baboons under the eaves of curious brown wooden houses. There we "dined" instead of feeding. On Saturday L. led me and S. to a rising ground named M'Pherson's Hill. We walked sixteen miles through rich market-gardens and rice-fields. We got down to a shore where were strange boats; their wild boatmen were drying cargoes of sea-weed for market. Lots of our garden-flowers were growing wild, and lots of queer birds were singing amongst the trees, which all were strange and new and quaint. If I could only talk to these good-humoured, grinning, brown beings, I should enjoy this place beyond measure, and stay in it for a long time. To-day I have been to church and to Curio Street, asking the prices of bronzes and vases and lacquered goods, and buttons and papers. Buying nothing. I mean only to see something that I fancy. I

his shoulder, made of

ivory, and that is all. The rest of the crowd have gone to the racecourse. Three went off in "*jinrikisha*"—that is to say, gigs drawn by running coolies. At least a dozen of them hunted me down a street, but I came here to write, and did not go to stare. To-morrow we go to Yedo by rail, led by the consul, "Russell Robertson." How many I know not, but we are to drive in a procession of coolies, and do tourist work. I have asked for a Japanese master, and mean to work hard for some days before I go anywhere. They tell me this letter had better go back *via* America, and that it will not start before Thursday. September 5th is the latest newspaper date here as yet.

Tuesday, Nov. 3.—Yesterday nine of us went to Yedo—Consul Russell Robertson leading. We went by rail, and each mounted a *jinrikisha* at the station. A man ran in the shafts, and a leader dragged a rope ahead. So we were twenty-seven mortals all going at score along the streets of Yedo. So we went for about twelve miles at least, the men running all day without apparent fatigue. I marvelled at them, and was ashamed to pay about three shillings to my coolies. We were taken to the *sanctum sanctorum* in the midst of the castle within three moats. When we got there we found something like a miniature Virginia Water, with rockwork bridges, ponds and trees, but with very little gardening. It was more like a park. The palace was burned, so we saw nothing but stones on which posts used to stand. Then we drove off full tilt to a garden and palace in which distinguished foreigners are lodged. It is European in furniture and fashion, but Japanese in material. The garden seemed to be devoid of flowers. The trees were trained, and the

whole thing was rather like the willow-pattern plate. Then we drove to "So you Can," as the English call the Japanese hotel, and there we fed our Government guide on champagne; he took it kindly. Then we drove about three miles to the Temple of the Goddess of Purity. It was beautiful and quaint, and strange and foreign. The lion of the place is a collection of carved wooden figures representing legends, for which see the *Yedo Guide*, which I mean to place with this letter when they come together. These figures are life-size, and really wonderful works of art. I never saw anything so life-like before. I could hardly believe that they were not dressed-up people. Then we went into a garden and saw water and stones and ponds as before. Then we drove off to Shiba, another quarter, and looked at the tombs of the Tycoons (Shoguns). They are crimson and black lacquer, bronze, gold, and enamel—strange, queer, magnificent buildings, which I hope to see again. Then we drove to the tombs of the forty-seven Ronins, for whose story read Mitford's *Tales of Old Japan*. All the coolies knew all about it, and by pantomime explained the chief events. The well where the head was washed, the place where it was placed and all the rest of it. By that time it was dark, so we went to the nearest railway station, and came home in the same carriage with Sir Harry Parkes.

The impression left on me by a double panorama twelve miles long and very deep is that of wooden sheds inhabited by tribes of Lapps and Indians and Tartars crossed with white men. If I wrote for a month I never could transfer to paper the picture which is in my own noddle, so I will not try. There have been terrible signs all over a





sheet of paper all morning for my log. And now I shall go post this.

J. F. C.

SAIANARA DAMA.

To show the resemblance between Japanese and Samoyedes a couple of portraits are placed as illustrations. My sketches from life have been photographed on the wood for the engraver. One is a portrait of the waiting-girl at the tea-house at Mianoshta, with her name written in Japanese by one of the servants. It was approved as a likeness, but the sitter pointed out that the nose was too broad. Here are the usual Japanese numerals which are derived from Chinese :—

1 Itchi, 2 Ni, 3 San, 4 Shi, 5 Go, 6 Roku, 7 Stchi, 8 Hatchi, 9 Koo, 10 Joo.

There is another set which I did not learn.

The following extract from the log for 1873 tells where the second portrait was taken. In many respects the sitters were like each other. The colour and texture of their hair was alike, and the set of their eyes and ears; both had buttons at the end of their broad noses; and generally the Japanese and Samoyede girls might have been cousins or sisters.

Log Extract—August 20, 1873, Archangel.—Sketched as well as I could seated on a block of wood surrounded by children and big men, all chattering and scratching their hides to windward and to leeward. The Samoyede girls' eyes were unlike those of any other human creature that ever I saw, but when they were opened wide to laugh, they reminded me of a nigger's eyes. The set of her ears was peculiar, they were placed very high. The women generally could stand

upright under my arm. The men looked like gruff bears, and they were very silent, except one who had travelled to Novaya Zemlya and elsewhere. They spoke Russian, and their own Samoyede tongue amongst themselves. It seems an easy language with few gutturals or nasal sounds. Here are the numerals :—

1 Apōi, 2 Sidé, 3 Njar, 4 Tjert, 5 Samla, 6 Mat-thka, 7 Sioo, 8 Sidet, 9 Havé, 10 Yōū; 11 Apōi-you-genne, 12 Side-you-genne, &c.; 20 Side-you, 30 Njar-you, &c.; 100 Yōūr, 101 Yōūr apōi, &c.; 1,000 You-yōūr.

No. XXIV.

YOKOHAMA,

Wednesday, November 11th, 1874.

MY DEAR MOTHER,

On Wednesday, 4th, we dined with Sir Harry Parkes in state. On the 5th four of us set off in a carriage and three and in a pour of rain, and drove along the Tokaido road, about forty miles, to a place called Odewarra. There we got up a dance, and slept. I never tire of staring at these curious creatures of Japanese. Their rain-coats are rushes or oiled paper, and when they work hard they wear their birthday suits. We meet grave men and sedate old women seated in *jinrikishas*, which are two-wheeled carriages drawn by coolies, who run. Their legs are the most extraordinary muscular supports that ever I saw. Two men ran me twelve miles yesterday over deep roads in two hours and three quarters. The biggest came up to my ear, and was less than forty inches round the chest. The other was quite a little man, but strong as a horse. From Odewarra, on the 6th, I was carried seven and a half miles on a *cango* by three men up 1,700 feet to Mianoshta. There are sulphur springs, hot baths and a celestial tea house

The floor is made of mats ; the walls of the rooms are sliding screens of bamboo and paper ; the outer walls are sliding boards with ventilators in them. The morning performance is to slide all the boards into a box, and pile all the screens one over the other, and then the house becomes an open shed of the most distressing cleanliness and coolness. Shoes are out of the question. We walked barefoot or in stockings, sat on the floor, and rolled on it, and slept there at night. Having blistered my feet, I spent most of my time in sketching and buying curiosities, of which I have got a lot, value £2 12s., which I mean to send home at once. On Monday, 9th, S. and I went off back to Fujisawa, when we got into perambulators and ran to Enoshima. That is an island with quaint trees, temples, and a village inhabited by human seals. On Tuesday we took boat and went to see the giant image of Buddha, forty-four feet high, of bronze. Thence to a great temple dedicated to Hatchiman, who plays the part of Hercules. Then we got into perambulators, and returned here last night. P. and O. came in later by carriage. P. comes back to-night, I believe. I am now going to Sir Harry Parkes's, and after that I shall decide what to do next. MacVean, son of the Free Church minister in the Ross of Mull, and head of the Ordnance Survey here, has asked me to stay at his house in Yedo (Tokio), and I certainly mean to accept. I shall stay with him, and possibly I may travel with him if he goes on an expedition. I am vastly amused in this strange wild country. It is so utterly unlike anything I ever saw or dreamed of. The people are the most polite. The landlord goes down on all fours and knocks his noddle on the ground, and grins and gives a parting gift to

each guest. The girls who wait are the most charming seals that ever were. Much have I heard of their beauty ; little have I seen. I constantly think of Lapps and Samoyedes, and North American Indians, and Esquimaux. They are all alike, with fat pug noses and long eyes turned up at the corners, with black hair and hair-pins and quaint costumes. For all the world they are like their portraits in Mitford's book, but their manners are graceful and charming. When they dance the fan-dance it is something to see.

We got three girls to play horrible music for us on guitars, and sing to one who waved a fan, and toddled about and did the fan business with great skill and dexterity. They were professional ladies of the theatre royal, and we entertained them with a banquet of fish and sea-weed and *sake*, which is a weak strong drink. Then we all bowed and said *Saianara*, and then the performance ended with payment in paper notes, each wrapped in paper, which is the necessary ceremony in presenting a gift.

Truly the manners and customs of these amiable seals are wonderful. I have some sketches, but really I have little time to do anything but rush about, and gape open-mouthed at everything and everybody like a fresh-caught greenhorn.

There goes the lunch-gong, so no more at present.

12th.—I have your letter of August 23rd. It has followed me over the Pacific. I send a bill of lading and three boxes, which are to go inside of one. The contents are curious things from Mianoshta, there manufactured by the peasants. I paid eleven dollars for the lot, and now I have paid six for freight and some export duty. The whole cost in round numbers amounts to \$4.40. They had better take on the things,



A SECOND-SIGHT VIEW.

if ever they arrive, which seems problematical. To-morrow I go to Yedo, which ought to be called *Tokio*,—the capital of Japan.

J. F. C.

SALANARA DAMA.

Log.—The worst of seeing a great deal that is new, in a very short time, and in company with very pleasant comrades who are in a hurry, is that memory is the only possible log. Japanese letters of the Chinese variety are forms which represent things and ideas—not merely sounds which recall things with the voice, or words which letters spell. I know not how other people remember, but I think in pictures;—with or without language. My metaphysical Ego sets his machinery to weave tapestry which Ego can see by second sight at the place where his eyes enabled him to see, and he there hears again what his ears let in to his comprehension. He hears tunes, and sounds of waves, and the voices of beasts and birds, as well as words and languages, unknown or understood. He hears and sees the past; but so far as I know my Ego cannot see far ahead. He dreams only of things which he remembers, and generally makes a muddle of real things when he is not wide awake. A medical student takes the cover off a dog's head and tries to play upon his brains. He is like a baby playing a grand piano. The dog's Ego cheated by false electric telegrams, and being master of a damaged engine, sends messages without meaning to his tail, which wags; or to his lungs, which howl, or growl; or to his legs, which try to run, under the false inspiration of batteries and foreign bodies. His small weak loom does weave images of hares when the dog dreams with the

cover on his unfortunate brain, and without the inspiration of a knife and galvanism. The dreaming dog talks in his sleep the language in which he shouts his war-cry when awake, and his legs keep time to the hunter's chorus in a rational fashion, which a reasonable man can understand without spoiling the engine by taking the top off. Having the natural cover on, and being awake, I cannot by the aid of my loom for weaving thoughts believe that the dog's hare or my Japanese pictures are hung up inside of us for anybody to see that chooses to cut us up living or dead. I let sleeping dogs lie, and think for myself when I think about thinking, and hear others argue dogmatically and doggedly about dogs. Our tapestry webs are woven over and over again with the same threads. We get into a way of weaving the same picture as musicians get to play the same tunes easily. The same types will print many books, and the same brains think many thoughts, while Ego is there to work the engine. Many pictures can be thrown upon one white screen out of a magic lantern while the light is lit and a man is there to work that engine. But the light being out the screen is as blank as the pages of my scrap-book are hereabouts. My lamp being still alight, and the lantern in working order, I being a year older, can travel again through Japan. At my will I can weave Japanese tapestry, and this sheet of paper becomes a screen whereon to write Japanese characters for other eyes to convey to other Egos. That much I can do—more I cannot. Something I know, the rest "*No sabe.*"

It has been gravely asserted and firmly believed that the eye of a murdered man, being microscopically examined, was found to contain a portrait of his murderer, which being pho-

tographed :—by the process of AB, was produced in court and convicted the culprit. A great many spiritual photographs have also been taken to take people in. It is remarkable that mediums who furnish so much knowledge of this kind should themselves be ignorant of the intentions of a vendor or buyer; of the contents of his private note-book, or his instructions to his agent. Such knowledge is not worth greenbacks. I have examined the eyes of butchered cattle, and never found a portrait of the butcher. No medium has ever told me anything worth knowing, but many have told me twaddle. If my top is taken off a great deal may be found inside of my works that I know nothing about; but nothing about my travels can be carved out of my eyes or brains, living or dead, if I be elsewhere. Others may be able to make me play for their entertainment, but I know that I am the only possible player of these Japanese tunes.

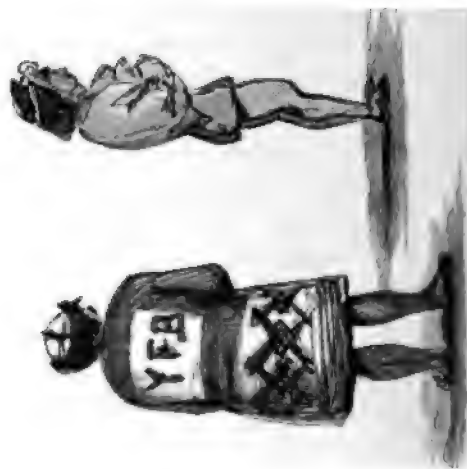
I hope not to be cut up alive for thinking aloud about thinking for myself. I was set a-going by a metaphysical society, of the three black graces: Divinity, Law, and Physic; by mediums in a land of second sight, and by seeing a baby playing a grand piano. All my second sight I take to be memory. All the mediums I ever met and examined were cheats. So much by way of extending log from memory and pictorial notes.

Were it worth while I could fill in many landscapes from outlines in letters, from notes, and from words, which are as keynotes to recall tunes. But *cui bono*? The region about Yokohama is best known to strangers, least Japanese, and most described. There is a printed English guide-book to the lions. It seems best to leave old letters to tell

so much of the story as was thought worth telling to friends at home at the time, and to give memory as little to do as possible.

A man with a long name, a long time ago, the best artist in Japan, sat on a hill hereabouts to draw. He threw away his brush in despair when he looked over Enoshima and the sweeping bay at Fuji-no-yama. He was artist enough to know that he, with paper and brushes, could not copy nature. I know that pens and ink cannot describe the faint fading image which I can weave for myself when I recall a very beautiful landscape; but those who live near Tacoma on Puget Sound, or near the rocks of the Sirens at the toe of the Italian boot, or near Naples, or Reykiavik in Iceland, may see something of the kind, and understand the beauty of volcanic Japanese nature. I have photographs, but I prefer to look at rude symbols traced by my own hand. They help memory to paint images of the truth for me. The photographs are out of drawing, and lack colour and life. I find that my own journal is best illustrated when I can shut my eyes and look at the screen of my own magic lantern alone and in the dark. Like the Japanese artist, I throw away my pencil and look over Enoshima at Fuji-no-san from Argyllshire. A man who has lived a long time in a given place gets so accustomed to it that he could never describe it for a perfect stranger. A perfect stranger in a new place can best describe it for another stranger of the same sort. If I wanted to know what part of England is most unlike Japan I should ask a Japanese what struck him most. Now wishing now to convey some notion of Japan to my friends at home, the best thing I can do is to notice that





THE FIRE BRIGADE AT YOKOHAMA.

which first attracted me as new and strange—as I can now remember it from catchwords.

Jinrikisha, man-power carriages, being utterly new, astonished me. Some eight or nine years ago great men, and small men who could afford it, were solemnly carried about in various kinds of "Sedan" chairs or palanquins, or in Japanese "norimons" and "cagos." People also rode upon horses, but, so far as appears from records and pictures and sculptures, nobody ever had seen a wheeled carriage in Japan. Some ingenious Englishman got a pair of wheels and an arm-chair, and hired a coolie to haul him about after the manner of a porter in a "Bath" chair. But this Yokohama perambulator was the seed of a great invention, which, having fallen in the right place at the right time, sprang into being and grew with the rapidity of a bamboo, till the whole country of Japan was overrun with jinrikishas.

There had been a great political revolution. Feudal barons with armies and with men in armour and morions and tabards, and all that pomp which belongs to our Lord Mayor's Show and the middle ages, had suddenly given way with a crash. There was nobody left to carry about in state. But there were vast numbers of people who were labourers out of work. Further, there were a great many farmers who had not dared even to ride their own horses, who suddenly found legions of sworded men who had lorded it over them, longing for work, in order to earn rice enough to keep life in their healthy, hungry bodies.

When the French broke out in 1848, one of the first things the mob did was to ride in king's coaches. They had out all the state-coaches and horses and all the king's men, and took

a drive. Gulliver's Travels turn out to be prophetic. The driven drive the drivers in Japan; the old arm-chair gave birth to a whole swarm of neat carriages, adorned by the clever hands of the artists who lacquered and gilded the state-chairs of Daimios. Ruined gentlefolks and soldiers and coolies put themselves into the shafts, the farmers got inside, and for forty miles up and down the Tokaido (East Coast road), I saw, for the first time, yahoos, where I had been used to see horses. I saw men in armour disarmed and harnessed, and got "a wrinkle on my horn." The people who can change so rapidly will be apt to go ahead. The picture which I have before me is not a single man hauling about an old woman with a bundle of greens going to market. I see again what I saw; on forty miles of very good road, with houses in sight on both sides all the way, as thickly peopled as a London suburb, with all the people working in the open air in any dress that happened to suit them, or in no dress at all. All along that busy road full of living pictures, I see country folk in man-power carriages trotting about their avocations as if they had all been raised for that special purpose, and taught that special employment from childhood. Yet all this began to grow in Japan some eight or nine years ago. It is the apotheosis of an old arm-chair which was a Tycoon's throne and is a post-chaise.

A Coolie.—I see a lady in full dress—gown, veil, gloves, bracelets, and parasol—gravely seated in a perambulator at Yokohama, going out to visit another lady as calmly as if her yahoo were a horse. She does not see the grotesque incongruity which makes me stare. The man is clad according to police regulations, but the old man of Japan is strong within



RAINY WEATHER ON THE ROAD TO MIANOSHITA.



him and his garments flutter loose. He is a coolie adorned with pictures;—an illustrious illustrated edition of a civilized man, whose civilization is barely covered by European forms. Such a man takes me out for a drive and strips to his work, and becomes a Japanese Greek athlete by folding up his garments and stuffing them under my seat. His hide is a gallery of Japanese art; serpents coil about his legs, a tortoise is on one arm, an eagle flies on the other, or a Japanese lady smiles at me from between his shoulders in some theatrical pose. There is no indecency in nudity; there is none in the style of art; but this particular Japanese phase of Eastern civilization is new to a traveller who comes westward from England over America, through another phase of European life. The East and the West in a jinrikisha are utterly astounding and grotesque to an amateur artist. I throw away the pencil; I can remember astonishment, and look at such marvels when I shut my eyes; but I cannot make anybody in England see what everybody in Yokohama sees every hour of the day with the utmost placidity. I can run away to the Vatican, or Pompeii, or up to the middle of Finland, and realize the magnificence of the human form and the ugliness of all manner of clothes; but clothes and no clothes in one carriage tend to laughter.

The Postman.—As I sit writing I see a quiet, well-dressed, common-place mortal, with a bag and a bundle of letters, walking up to the door, and presently I am reading the *Times*. I shut my eyes, and there is a paved road with great stone steps leading up hill and down. A couple of pictured coolies with embroidered bare skins for sole attire, are carrying me in a “cago” because my own blistered feet cannot carry me.

A third, with a long bamboo staff, walks in front. I am in a cage of bamboo, slung on a big bamboo as thick as a small fir-tree and as light as a bird's feather would be if the Roc were a fact. We pause for a moment, and my pole rests upon a couple of bamboo sticks. The bearers change shoulders, and off we go up-stairs sidelong, like a curious crab carrying off a curious creature. The trees are strange, the fields are strange, the rocks are strange. We pass a group of stone images stranger than all the rest. We pass stones set up like stones, which I can look at here or in Argyllshire, stone pillars at the two ends of a long regiment of megalithic monuments, whose wings are at the extremities of the old world. We call them "Druidical"; here they are "Buddhist." Nobody living knows anything about them. Chinese civilization is old; the Pyramids of Egypt are old; but who is to say where this custom of setting up memorial stones first began? or who were the builders of Carnac in France, or of Columba's stone pillars out in Donegal? I am taught that Turanians were megalithic. I see that Japanese are. But the post. A rush of some dozen light, active lads, with straw hats and straw sandals and waistcloths, suddenly flit noiselessly past my toiling bearers, each with a light bamboo pole balanced on his shoulder, and a couple of paper parcels neatly folded in oiled paper slung one at each end. With the grace of Léotard and the action of young rope-dancers, a scattered cloud of running postmen, bearing the imperial mails, skip up the stone stairs of the Tokaido, and drop down a steep, slippery and brae. They dash lightly over a bridge of bamboos mounted lightly on the rolled stones of a mountain burn, and are gone over the hills and far away in less time than I





BUDDHIST MONKS AT MANOSITA.

can write this pen-sketch from the vivid picture which I can weave at will. Once more I throw away the pencil. No artist ever has produced a picture that runs and changes at every instant, that is many days and many miles long, that can be woven in a moment, to make room in an instant for another at the antipodes. A Buddhist tells me that my life and I do not belong to this body, and that we shall go on—that we have been going on together. I don't remember anything beyond four years old. "*No Saba.*"

An illustrated book is a very poor production to a mental journal; that's a fact. I threw aside my pencil and my pen as soon as ever I saw Japanese characters and the haste of my comrades.

Cairns.—There they are, familiar Scotch cairns. A man was drowned in my youth in a ditch. Many a stone have I thrown on his cairn. Here is a stone Buddha with a cairn of stones in his lap. The children of the place throw the stones, and one who had been half round the world explained that each stone meant a prayer to Buddha to help their dead parents and friends quickly out of the Buddhist limbo into some future better state. Each stone cast is an act of merit which will help the young cairn-builder to rise in his next life, according to the heathen. Not very long ago, near Dundalk, in Ireland, I saw a megalithic monument, dubbed "Cuchullin's grave." A great round-backed stone stands on three tall stone pillars, which would puzzle engineers to raise, and on the top of the stone is a cairn. "They will be throwing stones up there, and I tell them that they will be married if they can make the stone stop up," said an old Irish dame.

Still later, at Mariposa, in California, I saw the necks of bottles peering out of a hole in the globe-trotter's bottle tree. "They throw them there to see if they can make them stick," said a prosaic waiter who had ridden up there with a pretty housemaid in a hat and feathers to have a picnic beside a spring. It is a human custom to make cairns, Americans, Easterns, and Scotch still are great cairn-builders. It is a human custom to account for such customs. Here within my experience are "memorial cairns," of which one was built to record the gathering of ferns in Mull, cairns unexplained, sepulchral cairns of my own time, matrimonial cairns, frivolous bottle cairns, serious Buddhist cairns in Japan, and pyramids in Egypt. I read that the pyramid is but the improved sepulchral cairn of megalithic Turanians civilized. "*No Sabe.*"

I can make nothing of cairns, and I can see no pyramids in Japan. A stone is beside a great tree near the temple of Hatchiman at Kamacura, where is a well, and people there cast stones which have made a cairn; Hatchiman was a general, and is the equivalent of Hercules in Japanese mythology. I suppose that cairn-building was a human instinct, and has been turned to various uses by those who swayed men for their own ends. In Ireland it is an act of worship to add a stone to a holy cairn near a pillar-stone on which a cross has been carved. So it is in Japan. I know that I performed the act when I was a child because an older kilted person did it when he taught me the meaning of "Clach 'ad charn." I know nothing about the origin of cairn-building, and throw away the pen.

"Water. The Japs are always bathing in hot water





TEMPLE AND TORRI, MIANOSHIYA.

We all got into hot water at the baths at Mianoshta. "I want to find out how they heat these baths," said one of my comrades. I had never thought of that question, so we got an interpreter, and asked. The water came in bamboo pipes. We followed the pipes and got to a rivulet, and beyond that cold, pretty, dashing mountain-stream we found a hot spring in the water-course. We never found out how the water was heated. But high up on a hill-side we saw steam blowing off, and learned that a great many hot springs were there. Some energetic youths walked over the hills to a big lake, where more hot water comes from the foot of "the beautiful." Though the beautiful Fuji is at rest, a smaller cone was smoking out in the sea when we arrived from the other side of the Pacific. There, in Oregon, and about the Yellow stone; in Iceland, and elsewhere, more hot water is boiled by the same fire. There is a good deal to be discovered about hot water, and there was a great deal about Mianoshta that was new.

Shampo.—The common Japanese luxury of being kneaded and punched like dough by a baker was new to me. A tired friend, who had walked far, sent his Japanese servant to fetch a celebrated operator. Two old women came. One, practitioner took the patient, the other, unasked, took me. Both were wrinkled, plain-headed, brown female persons, with carefully-blackened teeth and shaved eyebrows, to prove their entire respectability. I had somewhere seen a horrid picture of Britannia drained of her life-blood by a vampire bishop. I think it was an H. B. of 1830. It horrified and haunted me, and rose up unbidden when I saw my prostrate comrade on the flat of his back, and this terrible old black-

toothed being clawing his throat and the place where his heart ought to be and his dinner was. I tried to sketch them, when my own left leg was grasped, and down I went beside my friend. Up one leg and down the other, up arms and down, travelled the talons of that terrible old anatomical witch with all the skill of a surgeon bent on vivisection. Every muscle seemed to be familiar to her fingers as strings to a harper. Each in turn was pulled and rolled, and stretched and replaced exactly where it ought to go. The knee-pan was rolled about and eased; the soles of the feet were slapped, and the ancles arranged. Every bit of the body that would have suffered from hard work was treated with the skill of a dressmaker folding rumpled clothes. "Arigato," said I, when properly smoothed out: "Thank you." "Arigato," said my comrade, who was a private secretary in the Gladstone ministry; and then we presented coins in paper to the operators, and compared notes.

"Do you like it?" "Well, not much."

"How do you feel after it?" "Much as I felt before." "So do I."

Some thirty and odd years ago I was tired and dusty, and took a Turkish bath at Napoli di Romagna in sunny Greece. A very muscular old Greek shampooed me, and I never shall forget him. I can see him now in a haze of steam. He cracked every joint in my body. The last thing he did was to cross my arms on my chest, kneel on them, put a hand under my back, and give a sudden wrench, which made something about my shoulder-blades crack like a whip. Since then I have read the Water Poet's description of breaking a man on the wheel. The Japanese proceeding is

the least unpleasant of these three ; but I don't seem to care much about being shampooed again. The usual effect is narcotic, and the result the abstraction of loose coin. The artists generally are blind men.

Art.—The blacking of teeth and the shaving of eyebrows may be fashionable, but it is not ornamental. I prayed an otherwise beautiful landlady to permit me to examine her teeth more closely. They were beautiful, sound, regular teeth, that might have been called pearls for lustre ; but the pleasant smile of that amiable and very well-bred and most respectable Japanese matron was dark, horrible, and cavernous, because of her black teeth.

Hamlet might have spoken his speech over that living death's head. The strange part of this matter is that all the women with black teeth brush them carefully, and keep their mouths wide open and draw back their lips, and grin so as to make the most of the ornament.

Other kinds of ornamental art on swords, bronzes, and such like, had my special attention on this cruise, because the objects are authentic, of known date, and historical. I took rubbings and mental notes, and returned to Yokohama more determined than ever to buy nothing there. The moderns have broken out in shams, to catch globe-trotters. The shopkeepers lay prices on for their fleecing.

Daiboots.—The ritual at Buddhist churches made me stop and comrades fume. I was comparing the service performed for my edification last year at Astrakhan by the most western of Buddhists, with the performance of daily service near Daibutsu. Great bronze Buddha, 500 years old and forty-four feet high as he sits, looking out over the ocean as far east as

his religion could go. An altar, very like a Roman Catholic altar, adorned with vases and flowers and candlesticks; a priest in vestments chanting in front of the altar; drums and noisy instruments keeping time; an old woman on her knees with a string of beads rubbing her palms, and praying earnestly with her whole heart. That and a frame of bamboos waving near a yellow beach, a blue sea, and a distant volcano, is part of my Japanese picture-book. Beside it is the chapel at Astrakhan, and near these extremes of Buddhist worship is an old Irish dame on her knees with her beads praying earnestly, and rising to pace sunwise round a grey pillar stone in Donegal.

Enoshima is linked to islands near Naples. Rocks, waves, houses, great green pines on the top, quaint streets, shops full of marine treasures, shells and shell-work, baskets, corals, all built up to catch customers, like Brighton or Margate wares; but with a difference. Heaps and piles of gorgeous shells thrown away as men cast out buckies and oyster-shells where I was raised. If diamonds and gold were common enough, they too would be somebody's rubbish. Here they are: incredible crabs, and marvels of the sea that are exhibited in glass cases in England, common as dirt, matter out of place, fish out of water, sea-shells on shore, rubbish in heaps about Enoshima.

A cave with an arm of the Pacific in it, like many a wild western sea-cave that I know well. Away over the rocks to darkness; then to a flickering speck of a lamp; then to inscriptions and a shrine close to a trickling rill of water; priests and boys and tips; a drink of water from the holy spring, out of the stone and I have done the shrine of

a divinity who took the form of a snake and haunted this region. Melusina, myth of the Middle Ages, the Sea-maiden of my own country, Seal-maidens of the Orkneys, Sea-lions at the Golden Gate, Siren of Ulysses, Benten :—here they all are a reality in the minds of men, Snake-men and women objects of adoration to a tribe of living women very like Seals.

“Hai! you fellow, come along, do. What are you doing all this time!”

Rush, clatter, stumble, plump into a sea-pool up to the knees. Old habit strung the nerves to resist cold; they relaxed, for the sea-water was hot. There is the hurrying Briton chafing in the boat; there the energetic Turanian doing his work.

Pilgrims.—Down from steep cliffs of geological interest, by a steep path from amongst shrines and temples and trees, pace a group of pilgrims. Their heads are shaven save the national pigtail top-knot, their sleeves look like blue wings; their girded loins and black tights, and wooden clogs with white strings, and all about them are new, genuine, wild, living pictures of life in Japan. A flat folded paper, prayer, or relic a foot long hangs from the neck of each, crossing the breast like crosstrees on a mast. They wear swords and have the bearing of gentlemen. Steadily, quietly, slowly, in a purposelike fashion, they cross the tidal rocks below the cliff, and disappear into the shrine of Benten to worship Melusina, the Mermaid Snake divinity, who is Purity, and has been converted to Buddhism, and is a fact for these pilgrims of the brine.

“I say, you fellow, we shall never have time to do it all

and get back to dinner. Come along, do."—"Give us a light; then and let's smoke."

Buddha—there he sits, figured in bronze, the apotheosis of absence of mind; a gigantic nonentity thinking of nothing; but a very grand work of human art, fit to rank with those of Egypt. There he has sat cross-legged for 500 years, till the tide of life has ebbed from the place and left this magnificent image of an idea which has entered into the being of millions between the Volga and the Pacific.

"There is rest for the weary,
There is rest for me."

Here is personified rest from troubling, that grand aim of all these toiling millions, the endless repose of "not to be." It is a grand statue, very grandly expressing passionless repose perfect stillness, a dead calm, absence of mind. A lively pleasant shaven priest, who smiles and sells photographs and keeps an album for signatures, leads the way, and we go inside. It is empty, it is vacant vacuity. There is nothing in it but a few wreaths of sweet curling smoke rising from smouldering joss-sticks stuck in a blackened bronze shibashi.

"To be or not to be? that is the question."

Is all this struggle for life to end in smoke? are all the efforts of men to get on and go ahead and win prizes to end in getting to the end of a tiresome journey, and to sleep:—perhaps to dream? Can we who dream now, ever forget the philosophy of *cogito ergo sum*, even as he who has attained Nirwana, and now is an empty image of absence of mind at the edge of the ocean?

"Onward, Christian, onward go!" "I say, you fellow, come on; it's getting late."

"There's no rest for the wicked,
There's no rest for me."

Good-bye to Hatchiman and Hercules, Benten and purity; trees and serpents; pillars and wells; holy stones and hot water; sand, sea, and volcanoes; cairns and ruins; shells and rubbish; Buddha and contemplation of nothing at all. There is no rest, but much work and little time. Are we not all "Can-do" philosophers bound to go ahead?

"Go along, you disciples of Buddha in harness, and haul me home. Tell them in Japanese that I'll give them a dollar each if they get us in before dark. Hurrah for Old England and Yankeedoodledom, and the great Aryan races who make others run. Go along, my hearties!" And so they ran and we rode, and we got to the Grand Hotel in Yokohama and the delirious activity of real life.

"Il segreto par esser felice."

"What's the Japanese for beer?"

"Boy! beer sake chodai."

"Beef, arimasta? Arimasta."

"Then fetch me a beefsteak."

"Arimasen."

"What! not got a beefsteak? Oh! yes, I see, it's roast beef. No. 3. 'San,' 'chodai,' 'pan,' 'bread.'"

"'Arigato, yorashi.' Thank you, all right."

"Hulloa, old friend, where do you come from?"

"I came out of infinite space upon an aerolite."

"Rubbish! where are you going to?"

"Smoke."

"Bosh! what are you thinking about?"

"Philosophy."

"Scherzo e rido la sorte."

"Dotc, hera ogi san?"

"Atchera. Here he is."

"Who the deuce do you call the old gentleman?"

"By all that is comical that little Jap, Diablotin, in black tights, calls me the old gentleman."

Republican familiarity never went so far.

And so we feasted high and merrily; a pleasant party of cheery globe-trotters, whose sole defect in my eyes was that superfluity of Aryan energy which would not allow five minutes for the contemplation of great Buddha contemplating the Pacific Ocean in dreamless repose. I am a slow coach, but fate has always harnessed my steady wheelers to human steam-engines. So I went a long way in a short time; my notes are catchwords; and memory has to see this part of Japan by second sight from Argyllshire.

November 11, 1874.—*Log—The Races.—Yokohama.*—Pictures are short-hand notes for those who can read them. Here is a picture made on the spot, which starts into life and colour when I look at it after eleven months. It is my log. It is a bright clear day. The bay is blue, and the boats are swarming out to the horizon like white flies. Up the narrow path I wander past the barracks of the French and English, rising a hundred feet or so from the town by the shore to a plateau. The way is crowded for a mile or two with all that is quaint, grotesque eastern and strange, western and out of keeping. A handsome Italian lady in a carriage with smart
 ... her ... will ... led of ...

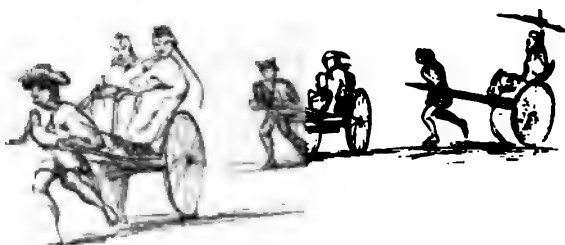




Tinahiki Totobaria
Nov 11
Races 1874



Nov 11 1874
Totobaria
Races



sharp run by a "betto." He is the running footman of Japan. With his crested pigtail and shaven crown, and horns of hair, his black tights and loose sleeves, he flits noiselessly along at the rate of eight or nine miles an hour, making way for the quality. He is a remnant of the Daimio's procession; his followers are his leaders now, and they are all racing to the races. By the wayside squats a disciple of Buddha, with nothing earthly on but a hat, a waistcloth, and a pair of straw sandals, contemplating the crowd. He is nothing uncommon; he is only a country man, a market-gardener, taking a rest in a posture that would tire a western more than a day's labour. A shout and a scramble, and clear the way for the favourite—a wiry pony, led by a following of bettos, who might be the troops of the Spectre Monarch at Astley's Amphitheatre. Hurra! here comes Jack tar in a perambulator, drawn at a fast run by a little Jap imp half his size. A French marine follows in his gig. A Russian, a Brazilian, a canny Scotchman, two Chinese banker's clerks in blue, drawn by a little bantam cock of a Jap, warranted to thrash them both into fits in no time. Here are all the races and Japan going ahead of them all and hauling them all to the races. Here is a herald in a Tabard, there Venus *in transitu*, scrambling up a hill on pattens with Cupid on her back. There is the grand stand, there the ring, and the opera-glasses, and the costumes of Paris, Glasgow, Vienna, New York, and Frisco. There in a carriage sit the ladies of Japan, all embroidery, tortoise-shell hair-pins, paint, silks, and braveries. But their beauty cannot withstand that brilliant Eurasian grand stand. They are but civilized Samoyedeas.

"I am so glad to make your acquaintance. Come and see the lions. Ain't these beautiful creatures?"

"Can't say I see it, but they certainly are very picturesque, and I'll come to your studio. Thanks. I'll stay here in the crowd. I don't like getting amongst the quality. Good-bye."

And so he went his way, and I stood amongst the crowd, and laughed with them when the dog ran over the course, and a big bearded marine ran after him in vain. Then back to the grand hotel and gas and a good dinner, and the smoke-room and long chairs.

"Have you been to see the photographs?" "I have. I saw one of a lot of criminals who were crucified close to that racecourse not many years ago."

"Have you heard the story of the Hakodadi consul?" "No. Let's have it."

"A very few months ago a Japanese of the soldier class, entitled to wear two swords I believe, was sent for to join the army and go to China. He did not choose to go. His neighbours said he was afraid. Like Yankee Doodle of the poet—

"When his commission he had got,
He turned such a coward,
He wouldn't go to Canada,
For fear of being devoured.

"He said he was not a coward, and that he would prove it. He felt that the advent of foreigners had coincided with the ruin of his class, and turned the gentlemen into coolies. He went to the nearest open port frequented by foreigners, and walked about as it were on the walk beside the sea here, that we were walking last night. At the dusk he met a man who was strolling heedless, and here he had





been wont to ruminate. Out flashed the famous sword of Japan, and down fell the consul. His body was found hacked fearfully, with sixteen or more gashes in it, each big enough to let out his life. The man who was not afraid and came to prove it, left his foreign victim, and went to the authorities and denounced himself according to the code of Japanese honour, which also was the Icelandic code, as described in the Njal saga. He was not of sufficient rank to have the privilege of suicide, I suppose. Accordingly he was beheaded. The operator, not being professional, slashed his shoulders, and made a mess of it, but he got his head off. And so the story ends. That was a few weeks ago. Think of that when you smoke tobacco. It is all very fine to go to the races, and talk English to Japanese gentlemen in black clothes, hats, boots, and wide-awakes, and think that you have got it all your own way here in Japan. No, sirree. I reckon them little chaps are not going to be beat by any race on the face of the earth. They'd cut you down, and chop you up; and so I guess you'd better be very polite in Japan, and keep your fists and revolvers out of sight, together with your opinion of yourself, and other valuable properties. Let's liquor. Boy-ee, cocktail, chodai. San cocktails: three of them. No. Cocktails all round. I'll stand drinks. Now sir, which is it going to be? 'Rule Britannia,' or 'Yankee Doodle Dandy,' or 'God save the Emperor,' or 'Mourir pour la Patrie,' or a Japanese dance by the characters? After the Derby Cremorne. I am going to bed. Good night."

November 13, Railway Time-table.—There is another page from my picture writings. A Buddhist priest, whose duty it is to do nothing at all, with his head shaven as smooth as a

melon, is standing on his wooden pattens with a courier's leathern bag outside of his blue Japanese coat, spelling out the time-table, and wide awake. It is printed in Japanese and in English. He is going to Tokio; I to Yedo; and we are both going to the same city by rail from Yokohama. When that railway was opened in form by the heaven-born emperor, the Mikado, not very long ago, a great number of Japanese swells and belles were invited. They came, and they got into the train, and were as pleased as children with a new toy. Now it is the custom in this land of clean mat floors to kick off sandals, shoes, pattens, clogs, or any other walking foot-gear that may have been worn outside. They enter a dwelling barefoot or in split white socks with a thumb end, as neat as gloves. All the well-bred, polite Japanese people who got into the first and second class carriages for the first time stepped out of their clogs and left them on the platform in rows. The engine snorted and the train moved. Then a mingled cry of woe and laughter burst from the passengers as they realised the fact that they had left their old clogs in the lurch, and that regrets were bootless as they were. Being a very practical people they have taken to wearing boots, and they suffer horribly, for their feet are not as Aryan feet, and their boots being imported pinch.

Half an hour or so and I am in Tokio. To make that journey a few years ago was a feat and an adventure. Armed to the teeth with pistols and weapons of all sorts and sizes, the Aryan stranger who had got leave mounted a steed and rode with a strong escort of sworded men—not mere guards of honour, but faithful soldiers sold off for duty. They guarded the stranger on the right hand and on the left from the very

retainers of daimios as proud and hard to deal with as a mediæval baron in a romance. At any moment a samurai, elevated with love and *sake*, or anxious to prove the temper of his sword, might rush out of a suburban tea-garden and cut down the stranger who was riding to the capital to see some besieged representative of his foreign country there. So that journey was described to me by men who rode to Tokio about the time that Oliphant wrote his description of life in Japan. A revolution bred a railway and a telegraph, and the old ways of Japan turned to new ways. The Buddhist priest put on a courier's bag, and the court-dress of the Mikado's Court became the republican black coat and white tie which American citizens wear in Europe. The Mikado, heaven-descended, escaped from his own castle, put on the tweed suit of the T. G. and Globe-trotting Towrow, furnished by some foreign clothing establishment, lit his cigar and drank champagne and enjoyed life like a christian gentlemen. Here we are, all going ahead, but where?

Itchi Yamiti Yashiki, you Jinrikiska man. Here; take a hold of my luggage. Put it in. I'll walk. Off we go. somewhere right through the heart of the capital of Japan, a wild herald all over patterns on his tabard drawing my goods and leading me to the barrack and palace of a de-throned daimio. In there it has pleased the Japanese Government to lodge the head of their survey, Colin Mac Vean, son of the Free Church Minister in the Ross of Mull "Failte." Presently we are jabbering Gaelic like pen-guns.

"The world's my pillow, and here's my bed."

Here, look at it. The wool of it was gown at Ardmòr in

Islay ; the thread of it was spun at Ardfenaig, in the Ross of Mull ; the web of it was woven in Iona ; and these are records of all the places that have come under my plaidie since Long John made me a present of it in September, 1870 :— Chi Mi thallad an Ardmhòr. Ach m'an d'thig an saoghal gu crìoch bithich I mar a bha. An eilean muilleach, an eilean aluin, 1870. Bha mi aig banais a'm baile In'iraora, August, 1871. " I'm afloat, I'm afloat, and the rover is free." Tha Sgeul beag agam air Fionn, 1872. Scandinavia, Archangel, Astrakhan, Daghistan, Caucasus, Crimea, Stamboul, Greece, Italy, France, came under my plaidie, 1873. And here we are in Japan. I prefer having my plaid embroidered to having my hide pricked with needles. Let's find an embroiderer. We found one, and got Nikko and Tokio recorded on the plaid. At Kyoto a Japanese dragon and a long-tailed tortoise were added in 1874. A Chinese butterfly was put on at Canton. in 1875. In August an old friend embroidered Tachdar mara's tir agus sith Choinhearstach Mull 1875. *Ne Obliviscaris*. The Children of the Mist, September, 1875, completed the record on the mystic plaid of the circumnavigator. Got home.

That's where I was going and got to safe and sound without adventure, unless it be that the human pony who hauled my luggage to the house of my Japanese mullman demanded *ni boo*, whereas his fare was *ni shi*. A London cabman could not have charged a stranger two shillings instead of sixpence with greater presence of mind.

Then out for a walk. It would cost a ream of foolscap and a large sketch-book to make a journal of that which memory retains of that first quiet, enjoyable, dawdling stroll in a place which is utterly strange and unlike anything that

these eyes ever looked upon before. There is a grated building, from which comes a clatter of cheery voices conversing amicably. It is the public bath, and it is brimfull of hot water and citizens of all sorts and sizes, sexes and ages, bathing and conversing as people do elsewhere in clubs and reading-rooms. Somehow they suggest a flock of ducks squattering. "You mustn't look in there. They don't like strangers to stare at them. Some few years ago these baths were open to the streets, and they all bathed in the same bath. Now, since foreigners have come, the baths are closed, and there is a bamboo rail between the men and women. They have learned that we think all this strange, and they don't like us to laugh at them. Come along." So we went.

"There's a fellow cutting wood blocks for printing. They are capital artists in that line. They use pear-wood, and the softness gives that peculiar soft touch to their woodcuts which is so different from our hard lines. That fellow is making a block-book, and very well he does it. I have watched good artists in England engraving my own drawings on wood, and I know that these little Jap imps are doing real artist's work in that open shed in the fresh air."

"There's a rag-shop. Stop a bit. Why, there's a bit of a mandarin's dress all over the dragon-myth. *Ikura?* How much? Tell him I'll come to-morrow."

"There's an old curiosity-shop. Why it's brimfull of sedan-chairs and norimon's... *Ikura?* *Ni ju rio.* What, twenty dollars for a Daimio's state conveyance, with lacquer and gilding enough for a small lord mayor's coach! If I were a householder, or a rich banker, or if I knew what on earth to do with that, I'd buy it. I say, McVean, if I were

to get carried to church in that, out in the Ross, what would the minister say?"

"What the deuce is that fellow doing?"

"That's a fortune-teller. There's lots of them. That one is telling fortunes after the Chinese fashion. He is rolling a sheaf of sticks in his hands while these two worthy women look on with intense interest and firm faith. He will read the characters which are inscribed on sticks which will come out of the bundle, and consult his books, and give the oracle. That is the Asian equivalent of the American Medium and the Highland Seer. These fellows sit here day after day and earn their living, and do their duty to their neighbour, and do him and his wife." Are they humbugs? "Well, that's not easy to answer. The last time I was in the Ross of Mull in 1870 I discoursed a worthy old man over a wall, and he prophesied to me, with the most perfect air of conviction about him, and without the remotest idea of payment, and I shook hands with my friend and departed with the firm conviction that he was *not* trying to humbug me. That which he said was dreamed by another man in 1847; and it was said to me a third time by a very old woman who lived out on a point in the Atlantic, and had the reputation of being uncanny, and a witch. All three seemed to be firmly persuaded that they were looking into futurity, and that they saw me a great heir and landowner. I have this world or my pillow in fact, and ~~am~~ hope to inherit in the next. They all liked me, and they all ~~hoped~~, and they seem to have got to expect, and finally to believe, in their own imaginations. Now that worthy over there may believe in his sticks as firmly as these women believe in him and other

women and men believe in mediums. In the name of the prophet let's book him as a peculiar variety of *homo sapiens*." So he was booked in a note-book, and by the magic of memory I look at him, and see and hear and think over again thoughts that run alongside of two West highlanders in the far east—seers by inheritance; by experience philosophers of the Try and Can-do class, who want proof of things improbable like spaedom with sticks.

There, in front of us, rose the green gnarled, red-stemmed pines, who peer over the walls at Shiba, the tombs of the Shoguns. There are the coloured gates which make pictures in the sun and shade of the green trees; there are the strange signs of the tea-houses and eating-shops of the quarter; the strange Japananese croak of the eastern crows; the squeaking of kites wheeling in the bright air; the crowing of pheasants; the clatter of drums at a temple:—the endless stream of bright, strange, foreign things goes flitting before us, and ever and anon comes the second-sight of memory: the boom of the sea on the rocks of Iona, and St. Columba; and history Gaelic songs and dragon legends, all demanding notice in Tokio capital of Japan. Races indeed!

“ The black horse and the brown,
Bonn ri bonn,
Swifter is the black horse
Than the brown.”

Hugi beat Thor when they raced, and I'll bet my money on memory to beat the favourite at the next race. I run away from having no taste that way.

“ Come away home and take a glass of toddy.” So we toddled home to the Yamiti Yashiki; and a whole gathering

of Scotchmen and Englishmen held a meeting in the Daimio's great grounds under the roof of my highland friend, who has a head to help his strong limbs to climb. In the early morning we rose and had porridge for breakfast and milk, and so we were happy. "*Ne obliviscaris. Fidus amicus. Terra mare fide. Set on.*" So say heralds.

On one of these nights in Tokio two English gentlemen with their wives dined with a Japanese prince and princess. As the stranger I had the honour of sitting next to our hostess, who was "*grande dame*," richly but very quietly dressed in her own picturesque attire. A number of young gentlemen of the family, retainers, who had travelled since the revolution, interpreted and served their prince and his guests at dinner, dressed in the evening dress of European society. The prince's own painter came in, and, being rebuked for some misdemeanour, fell on his knees and knocked his forehead on the carpet. After dinner we passed from a house furnished in the European fashion to a Japanese house furnished in the way of the country. It was lighted with paper lanterns, and devoid of any furniture except the national mats, but it was the very perfection of neatness. Returned to the drawing-room, to our chairs and glass chandeliers and argand lamps; the painter drew pictures for our entertainment, crouched on the floor. With a brush of his own invention he produced a bamboo on Chinese paper with half a dozen touches. Next morning the drawing and a photographic portrait of the prince were delivered to me, with a bit of dry sea-weed tied up in a paper cover with a secured string. That is Japanese. We were all poor

give gifts and accept them joyfully as I did. Lacquer tables, inlaid with gold, a state sword sharp as a razor, polished as a mirror, a gentleman's weapon fit for a soldier to wield, touched only with covered hands by the clan. These and such like ornaments in the drawing-room savoured of the genuine nobleman who had wit to march with the times, and the good taste to adhere to his national customs. If I name Prince Caruda I know that he will forgive me for taking, that liberty, and this opportunity of thanking him in a book for his distinguished hospitality to me—a member of Brooks's Club and a Whig by inheritance. I too have seen gentlemen serving tables in the house of their Chief out in the far west, and so I can understand this grand old dethroned Japanese daimio sportsman, who is a liberal conservative, making the best he can of an altered world. Men of his class must come to the top.

Log.—A straw thrown up shows which way the wind blows. A small incident shows more than a political treatise now and then. Attended by my interpreter, whom I have named Solomon for his exceeding stupidity, and accompanied by a young gentleman who is very well versed in Japanese, I went to Shiba one fine morning to sketch a gate. The point of view was in a street, and there was nothing there to sit upon. I hired a jinrikisha and put the shafts on a rest and got in and sat there. The boys of the quarter gathered about me, and passengers stopped to see the foreigner draw. The foreigner, well used to crowds, showed them his materials, grinned, and worked away, and found himself an object of kindly interest. Students of French, German, and English, with lesson-books, stopped and said a few well-chosen

phrases, and passed on, smiling and bowing. Many a crowd has gathered about this sketcher in many a strange land, but such a strange crowd as this never before. The smaller urchins had their hair carved into strange patterns, looked like imps at the play, and behaved like angels of politeness and decorum. At last the artist got interested in his work, and forgot all about the place and the people. The excellence of the jinrikisha consists in its superior balance. It rests on the axle like the beam of a scale. This one, so resting and supported in front, was steady as an arm-chair. But in a moment of forgetfulness the seated person leaned back. The gate seemed to be sinking down into the earth, the shafts reared up, and it was all up with equilibrium, and all over. It would have been supremely ridiculous to break a neck in this fashion. So, instead of falling submissively, the falling body wriggled sideways, and managed to come down on one shoulder without damage. But the sketch-book went flying through the air, the water described curves, and the brushes scattered all over the place. Now the right thing in Japan is to laugh when any misfortune happens to yourself. A capital walker who was walking over a very rough hill-road near Mianoshta in wooden clogs and in the dark, going with an English walker in good condition and hobnailed boots stride for stride, tripped and went over like a shot rabbit, hitting himself hard knocks. He laughed as if it were the pleasantest of customary pastimes. So I, having learned that lesson, laughed when I went heels over head backwards into the middle of a crowd of street boys and jinrikisha men in Tokio. But in Japan it is not the right thing to laugh at unfortunate people. The I had to

learn practically. There was not a smile on the face of a spectator. There was a look of great concern and sorrow and kindly sympathy : one angelic imp with hairy horns on his shaven poll brought a brush, another a paint-box, another a cake of paint, yet another brushed the dust off the coat of the stranger in a strange land ; and by the united efforts of all the gamins and their pet curious creature he was got into his seat again and finished the sketch.

If straws thrown up show which way the wind blows, a man thrown down in this absurd fashion shows the temper of the people amongst whom he has fallen ; and I having experience of many boys from the days of Eton downwards, pronounce my benediction upon the boys of Japan. They are angels though they are not Christians, and wear black hair, and are the antipodes of these angelic golden Anglo-Saxons, of whom the saying was first said. If a Chinaman had been spilt in any Aryan city of my acquaintance, the boys would have pulled his tail off before they helped him. It has been said that Japan is the paradise of little babies. I never saw one bullied, and I do not remember to have seen one child cry or maltreat another or hurt a hen. 'She is a fine leddy, Miss Grace,' said an old Scotch wife. "She wadna hurt a hen." They are fine leddies and laddies these imps of Japan.

Log—Wednesday, 18.—For the first time in my life dined with a Japanese gentleman in company with a lot of foreigners. We are the fashion clearly. Our host had some curious old Dutch pictures, which may be of value, and his table was a table served in European fashion. His waiters were neat moshme—pretty little women in their picturesque

dressers, who handed dishes with the skill and dexterity of practised artists. The grand event was a joint of beef, which our host carved as if he had been a Briton. It really was as neat a little entertainment as any English lady could sit down to. After dinner, wine, and tea, we inspected a curious collection of obsolete Japanese coins in gold and silver, and then took to the national evening pastime. An inkstone and brushes and gilded paper were laid out, and the gentlefolk wrote verses and gave them to each other. My gift is like the outside of a tea-chest for all that I can read, but being interpreted it is said to mean,—

“ The stream knows neither day nor night,
So nature's constant law is right.”

The old Chinese poet and Tennyson had the same notions of a river as it appears. They saw that it ran.

There never were a people so polite and so apt to learn as these little Japanese gentlemen. All I could do in return was to quote Burns on a gilded card :—

“ Some hae meat that canna eat,
And some can eat that want it,
But we hae meat and we can eat,
And sae the Lord be thanket.”

That and some caricatures, a vast amount of bows, and genuine hearty English thanks to my host the great banker, made a pleasant little evening party. A carriage and pair and a *batto* safely conducted us home.





No. XXV.

YEDO,

Sunday, November 15th, 1874.

MY DEAR HORTICULTURIST,

The inclosed beautiful picture represents a crysanthemum show to which I went yesterday with my host, Mr. McVean, and other folks. The body of each figure is made up of a pillow, and the head is a mask; all the rest of the device is a mass of flowers *growing*, but so arranged as to make up the dress or the real colour of the thing represented. The first thing I came upon was a white cockatoo, about ten feet high, with a yellow crest; his legs, on a perch, were carved, all the rest of him was crysanthemum flowers as close to each other as they could stick. The stalks were trained on a frame of split bamboos, and the roots were somewhere behind the frame, covered in straw. That was the *chef d'œuvre* of the gardener. His garden consisted of old dwarf trees in Japanese pots of ravishing beauty. Small plants were growing in coral, and in old fossils, and in large shells. The whole suggested more art than nature, but it was very pretty. The next device was a lady and a lover. It was getting dusk, and I had to ask leave to step over the bamboo rail and get near to make out what was cloth and what was crysanthemum. The next was an old sea god. And so each garden was a repetition of the last as to rockery, and pottery, and old trees, but each with a grand crysanthemum lay-figure as large as life, or larger a great deal, as in the case of the cockatoo. The first garden we went to was that of the Minister of State, Kedo. It consisted

chiefly of a pond and its banks; but on a place not much bigger than my monkey-green in London there were roads and rocks and caves and waterfalls as big as a bottle, and bridges and gold fish for all the world like a Chinese plate. The colour was given by maple and other red shrubs; the greenery was made of camelias. The gardener I have in my book; he wore a wadded coat and petticoat, and bare feet and clogs, and his appearance was staid and venerable. The wife brought us roasted acorns, and tea grown in the garden. The first came off an evergreen oak of large size, I believe. We sat under it and shook down the fruit and ate all manner of quaint things. It has beat me to get Mr. Kramer, the vendor of bulbs; he is all over the place, and I can't catch him. I must to breakfast.

FAILTE.

No. XXVI.

TOKIO (YEDO), *November 17th, and other dates to 19th, 1874,*

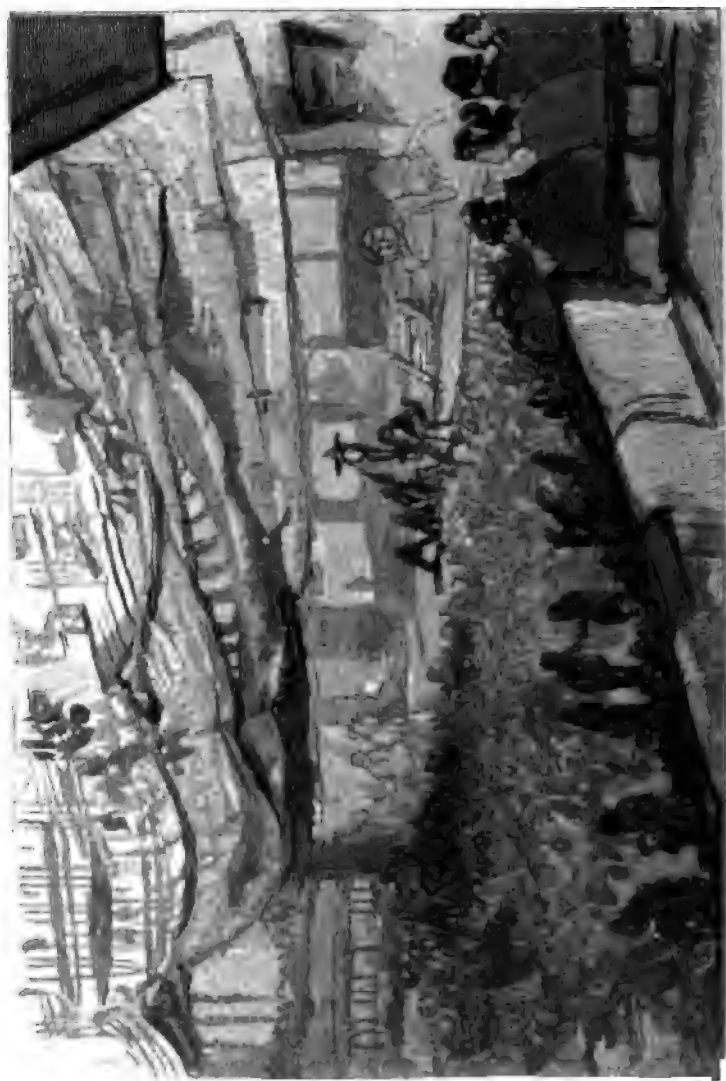
YAMITI YASHIKI,

*Chez Mr. McVEAN, son of the Free Church Minister,
Mull, Head of the Survey here.*

MY DEAR G.,

You may as well have this bit of my journal. I came here on Friday 13th, bag and baggage, and here I stay till I go to Nikko on Thursday 19th. It is quite out of all question to give you or any other body a notion of this queer town. It is about as big as London so far as breadth is concerned, but wild ducks and geese, cormorants and cranes abound in it, and foxes and martins, kites, pheasants and crows. A crow





THEATRE AND PLAY AT TOKIO.

a bank over a wilderness of wooden roofs to the sea through a greenery of Japan plants. When I go down into that wilderness I find curios that would drive the rector and O. crazy. I bought a suit of armour, plate and chain, yesterday in a box for four shillings, simply because it was so absurdly cheap.

Enamels, carved wood from temples, crockery, every sort of thing that you ornament rooms with in London here is in the shops for next to nothing. The country has been revolutionized, and the old clothes of centuries are rags in this market. I can't send you home a suit of clothes, but I do send you a garden of flowers. You put one in water and watch the result. I bought the lot for sixpence in the street yesterday, Tuesday.

One day we went to the play. The subject was historical, and consequently horrible. A Daimio conspired to kill the heir to the Shogun by letting a roof fall on his head. The carpenter accomplice betrayed the plot. The Daimio tried the carpenter, kicked and beat him, and finally crucified him on the stage. There he stood on his cross with spears thrust through him, and streams of blood pouring out of him, till the Daimio solemnly stuck a sword into his throat. Then much more blood ran down the man's naked breast, he gaped and gasped and died, and that act ended. After many more acts the ghost came and vanished, and there was much fire, and many tears. Then the wicked Daimio "drew his skian dubh and stuck it in his bowels." He made a face, and died—like a gentleman.

Meantime we had been eating fish and eggs with chopsticks, and drinking *sake*, which viands came in lacquered

work-boxes with trays in them. Then we went off to a tea-house where three professional ladies, hired for the purpose, played us a concert, and danced the fan and other national prances. Then Mr. McVean and I went home to 6.30 dinner and to Mrs. McVean.

Next day I spent amongst the tombs of Shiba. These are the tombs of Shoguns (Tykoons) of divers ages. They stand among tall trees under a bank, with wild weird pines in front tossing branches over the road. The gates are red and gold with dark tile roofs, and much carving. The temples and shrines are carved and finished as a Japanese cabinet is of the very best kind. Black and red and gold lacquer houses of considerable size, all over alto-relievo cocks and crysanthemums, gold pheasants, and monsters, and fastened with gilt bronze and enamel, are things to look at more than once. They really are marvels of art of their kind. Lastly, on the hill stands a simple solid bronze or stone urn, in which is the body or bones of the Shogun. Formerly a priest and a retainer in armour knelt all day on the steps. Now nobody seems to kneel or to care much for Shinto or Buddhism. Formerly foreigners were only admitted to the outer gate and that rarely. Now I wandered in and out, and did just as I pleased, on paying the few priests left a small fee of sixpence or a shilling. But the place is ruined. The government ordered all Buddhist temples to be turned into Shinto, which is the old Japanese religion, and consists chiefly in adoring ancestors. The enraged Buddhist priests burned the best temple on the day of the change.

Yesterday I went back again and sketched, and wandered about gazing. To-day we are going about making ready for

a start to Nikko to-morrow morning. There are grander temples, for which see the *Tales of Old Japan* by Mitford.

Now we are going to a Japanese party of swells. Last night McVean put on his kilt and gave a dinner. The chief guest was *Caruda* a Daimio, who used to have an army of 30,000 men, and a province to govern. The foreign office lives in his Yashiki (palace) now. He has a large income, and spends his days in duck-hunting and hawking. He certainly appeared to be a great gentleman, but I could not talk to him, alas! Instead, I sang him Gaelic songs and danced the sword dance. He was pleased. We had a pleasant party and a pleasant evening.

I shall not write for ten days.

J. F. C.

NO. XXVII.

TOKIO, I., YAMIT., YASHIKI,
November 29th, 1874,
Chez McVEAN.

MY DEAR MOTHER,

This is part of my journal, as I cannot be bothered to write the same thing twice. Ten days ago we set out from here for Nikko, which the Japanese call Kekko, beautiful. The party consisted of McVean and I, Katata, a young Japanese gentleman, Tsune, my Japanese servant, and two jinrikishas loaded with luggage and grub. Very few foreigners have been on this cruise, and it was very good fun. On the 19th we had got into a regular muddle, having hired two sets of men. We had at least two dozen coolies in the yard, and two master job-masters, all jawing at once. When these last spoke to Katata, who is a gentleman of good family,

they squatted on their heels, rubbed their shins, and bent their heads in reverence. I cannot describe, and I could not draw the curious scene of confusion. There they were men half stripped, shaped like Apollinos, men clothed in queer garments, and men half clad, with lacquered red lined perambulators, wandering up and down, and chattering like a flock of gulls over a herring shoal. Hats like mushrooms or small straw parasols, blue legs, black legs, bare brown legs; shaven crowns, straw sandals, coats like a herald's tabard in white and blue; bare brown backs, all over patterns in colours, tattooed, women, dragons' scrolls—every sort of device worked on human skin have I seen, and, above all, feet and legs that would have shamed old K.; and now in McVean's yard examples of all kinds danced and jabbered, till Mrs. M., with woman's wit, suggested the carriage. In a trice we were in, luggage and all, and off with a Betto running ahead to clear the way,—so we drove and ran about ten miles to the other side of Tokio (Yedo). But there we found three of our boys before us. They had dragged perambulators faster than the carriage. We picked up Mr. *Yoshi*, one of the Mikado's courtiers, and Mr. *Oyama*, a sort of naval secretary of state, who were going to Nikko, like us. But they changed men along the road and they were, presently out of sight. We hired three more men and vehicles, and off we set along the road to be wheeled ninety miles. The country on each side of us was swamped in water, and rich with rice. At every mile or two was a village. Cranes, geese and other wild birds flew about and waded in the paddy fields, and among all this a little lad ran with me at five or six miles an hour. *Seng-ja* to *Saba* where we lunched.

Thence we ran on till near dark, and slept at *Kashkabe*. These wonderful boys ran nine ri = twenty-three miles, and came in as fresh as paint. I kept no notes, and have a general impression of old market women, of horses in straw sandals with red lacquer cruppers and curious harness, of boys and girls with their heads shaved into the most hideous patterns with black hair for fringe, playing for toys. A regular moving panorama of life in Japan.

I saw the quern at work on rice as I have seen it in Iceland and in Scotland—"Two women grinding at a mill," but the stick was bamboo. I saw a man ploughing with the old Highland *caserom*, the very same foot plough of which I have a sample in my den at home. The difference was in the better material here used, and in an extra shoulder on which to turn the lever. I saw old women winnowing rice on mats in the wind, as I have seen their kind working at home; and near them were regular fanners copied from foreign models and found to be useful. In short, I saw the early arts of the far West out in the far East, and people like Lapps and Samoydes, and some kinds of native Hebridians, and I came to the conclusion that the same people were at the extreme ends of the old world,—“Melanocroids,” black-haired people, with certain arts learned before the yellow-haired fair Aryans got to them. They only got here quite lately, for there was not one fair-haired person on our whole cruise. The language, so far as I can get at it, is related to Lapp and Finnish in form, and in a few words. But it is not possible for me, an old crittur, to learn in the same haste as I used, and there is very little to help memory in Japanese. It is not Aryan.

As I said we slept at *Kashkabe*, and this was the manner

of our sleeping there and elsewhere. The jinrikishas ran up to the door, and everybody cried, "Ohio, Ohio dama Arigato"—thank you; hail domine. We stepped out and pulled off our boots and walked on shining boards and beautiful clean mats, to one part of a great shed. Bamboo screens with paper on them slid round us in grooves; we sat on a mat, and we were housed and roomed and furnished. Presently a bare-footed girl brought tea on a tray, sugarless and devoid of milk, and then a bronze box full of glowing charcoal. Then she sat on her knees, and on the soles of her crossed feet, with her back to the door, and served out sour plums with chopsticks and dexterity. By this time our luggage had come in. Then after a few smokes, as many square tables, three inches high, as men to be fed came in and set themselves in front of us, with neat little lacquer bowls and covers on them full of hot soups of sorts, and a china bowl full of rice. Chopsticks to eat with came in paper on each table, and *sake*, and a great round drum-shaped box full of hot rice. A loaf of bread came out of our stores, and the girl said to her help, "Koori pan"—there is bread. Such a thing had not been seen there before, as I believe. Sometimes we got fish and laver, and iced omelette with aspic, and all manner of queer good things, which we all ate with chopsticks, having nothing else handy. Now it really is not easy to pick up rice as a bird does with a long bill, and at first I suffered the torments of Tantalus; but practice has made me as dexterous as a crane, and I ended by feeding like a Japanese gentleman without soiling the mats; but I never shall sit on the soles of my feet, and my dinner over we smoked

about the fire-box, till the girls brought in a pile of cotton quilts, and of wadded cotton robes to roll us in, with little lacquer stools, each with a roll of clean paper on top for pillows. I got into my skin pesk, of Archangel origin, and laid the hood with my head in it on a carpet bag, and there we three snored on the mats till cock-crow. Meantime wooden shutters slid out of a box outside of the paper screens, and despite of the cold, we were snug, at least I was, MacVean has a bald head and no nightcap, and he shivered. In the morning tubs of hot water were provided in a bath-room, and thither we went and bathed. The other travellers did their bathing at night with open doors, in the dress of Adam and Eve. My modesty suffered, but I got callous after a few days. Then came tooth-powder, tooth-brushes and tooth-picks; and, by the time we were ready, breakfast was on the tables, and the tables on the mats, and then we were ready for a start. Each house has a garden, which consists chiefly of mud and stepping stones and quaint dwarf trees, with a big stone lantern in the middle. The top is like a great mushroom, as big as a carriage umbrella; the light is an oil glim, and the stand a great square or round construction, curiously shaped and carved. Into the garden go sweepings from the rooms, old tooth-brushes, and rubbish. I wanted to draw but there was never time, and I made nothing of it. So we shuffled to the street, put on our shoes, got into our perambulators, and started amidst a chorus of *Saianara, arigato*. Good-bye, thank you, for about a couple of shillings a head. The second day was like the first; our wonderful boys ran thirty-seven miles. We stopped at a tea-house and fed as before, and we stopped at another tea-house, and slept

there. We got out of the paddy fields to a pheasant country, with fine coverts of Japanese trees, dry fields, and groves of pine and cryptomeria. A great avenue sheltered the road and the panorama, which streamed past us. Two-sworded sulky Samurai passed us, and we passed them. A funeral met us; the body was in a square box slung on a pole of bamboo; the procession of priests, and country folk, and horses was a picture. Great snowy mountains came nearer, peering over a range of foot-hills glowing in sunshine, coloured with autumn tints, rich in woods, strange in form. Everything in the landscape was volcanic, the general outline like the Italian hills. We passed old women, spinning with quaint wheels, reeling the cotton and weaving it, and men dyeing it in vats. I bought a sample of towels, blue ground with white figures of men, and plants and birds.

We passed wells on the old plan—a stick and a weight and a bucket on a pole. We passed country people threshing rice with flails, and pulling off the grain with iron combs set upright. We drove through layers of mats, with rice spread out to dry in the sun, and with marvellous Cochin Chinas and Bantams walking about, pecking and crowing among groups of children with other brats on their backs. We passed village bells on high double poles, with cross-spokes to mount on. When they tolled, their tone was like Big Ben, but softer and sweeter. We passed stone shrines; with flowers in pots before Shinto temples of unpainted wood; Buddhist shrines, all red and gold and black, and carving with tent-like roofs and tiles and Torri gates. We passed groups of stone idols: Buddha and his disciples, each with a

deposited in the way for Paper

prayers, hung on strings, fluttered in the air from the temple-gates. A serpent-skin at one place indicated serpent worship. At another a great tree or a big stone was sacred and adorned. A string of pack-horses, with flags fluttering from the loads, came through the flickering sunlight and broad shade of the great avenue which seemed never to end, and every now and then the great mountain of Nantai, with its snow-cone, came out through a gap and finished the landscape. I tied my pedometer to one of the boys, and we had thirty-seven miles of moving Japanese life between 8.30 and dark. Then we had our tea-house night, and off again. On the third day we took a leader to each carriage, and went up a finer avenue than ever, through the foot-hills over a very rough road, up nearly a thousand feet, and by dark we had made out ninety odd miles and Nikko Kekko—the beautiful Nikko to which we were bound. It was dark then, and it is dark now, so I must finish this to-morrow.

29th.—I went to church this morning in a Buddhist temple, with a roof painted in panels with flying-birds, and with all the paraphernalia as it was left by the priests. Buddhist service was going on under the same roof. There was an earthquake before breakfast. I thought it was some one walking heavily in the passage and shaking the doors and windows. I am told to expect many more. I have promised to dine to-morrow at the St. Andrew's dinner in Yokohama, and next day here with the parson who preached in the temple. When I shall get out of this I cannot say and I cannot see, so halt. Last Sunday, 22nd, was a very fine day, so we took a walk. Our procession included four kagos, bamboo chairs carried by two men, with two to change. A

couple of them shouldered me, and, with long bamboo poles in their hands, stepped out, singing a kind of "hi ho, hi ho aryo," mingled with gasps. At ten yards they rested the pole on the stick, and changed shoulders. But I had such a cramped position, and I was so ashamed of being carried on a fine fresh morning, that I got out and walked five and a half miles to the first halt. MacVean walked, and my servant sat in state, till I found him out and made him walk too. The road was up a glen—full of trees of sorts, and lined with houses and temples and groves. All the people in the houses seemed to be engaged in making lacquer tea-trays. Our halt was in the bed of a torrent, where a tea-house stands amongst a ruin of lava boulders spread far and wide by the torrent. We lunched there, and then zig-zagged among the stones, over bridges, up and down the burnside, to the base of a steep pull. Then we zig-zagged up a mountain-road with seats to rest on, and pagodas, and all manner of shrines all the way up for nearly 2,000 feet in all. The sides of the gorge were basaltic, bedded with pumice, the vegetation was Japanese. What more can I say? We met stags carried on horseback, shot by hunters, whom we met with matchlocks returning from the hill. At one place we found a stone, on which stood a metal pagoda twenty feet high. The stone turned the compass, and an iron cash (coin) stuck to it. Below, in the river-bed, is a mine of gold or copper, but this was lodestone. I could find nothing glacial anywhere, but much water-sculpture in porphyry, and old lavas of sorts. At eight and a half miles we got to the top of a famous waterfall, which shoots the edge of a bed of basalt into a deep gorge. The gorge was old and full of trees and hills. It is called

Kaigyōn, which I believe to be the Spanish word *cañon*. Beneath the basalt a softer, porous bed of rock filters water, which spreads in a fan of small falls. These of course undermine the basalt, and the whole thing will eat back to the great lake, which is about 300 or 400 yards from the top of the fall.

The woods were full of bamboo grass, growing among snow-patches. The trees were relations to birch, and Japanese whom I did not know at all. How K. would have rejoiced! Mr. Smith, secretary to the Yokohama Club, with a staff of Japanese gardeners, went up with a horse, and returned with a load of rhododendrons and rare plants. The lake is large, about ten miles by five, surrounded on all sides by wooded hills, with the cone of Nantai above it, and a village and temple, abandoned for the season, by the side of it. It is an old crater I think, or a volcanic subsidence. It is not glacial. We found one tea-house, and then went home. I walked down to the river-bed, and was carried home with the cramp in all my legs, and two paper lanterns hung opposite to my eyes, so I saw little. Perhaps it was as well, for the wayside was lined with naked people washing themselves in the frosty air at their doors.

On Monday we went to the tomb and shrine of the first shōgun. These are the finest buildings of their kind in Japan, and the most wonderful work I ever saw anywhere. One railing has sixty panels carved in alto-relievo, representing pheasants, peacocks, coots, cranes, trees, leaves, flowers, rocks, &c.; each is about four feet by two; all are coloured, and each is extraordinary. Single feathers in the pheasant's tails stand out six or eight inches in front of flowers two

or three inches deep. By measure, the carvings are from eleven to fifteen inches deep of hiako wood. The whole gate and screen, is a mass of black lacquer and gilt copper, with green and vermilion all glittering in a bright sun in a frame of dark-green pines of vast size, which rise on the hills to the tomb which is on the top. Lions, elephants, apes, flowers, diaper-work on gold ground, copper tiles, gold-ridge poles, make a confusion of harmonious colour which beats description or copying. On each side of "the month-gate," so called because it takes a month to admire it, are gilded lions, one with a mane and tail of emerald-green, the other smalt blue. Outside sit two figures with bows and arrows guarding the gate. Within is the shrine, all lacquer and colour and carved wood, hung with gold brocade and bamboo screens, with golden bronze lilies and vases, six to eight feet high, with bronze cranes as big as the lilies, and screens of precious wood, carved and painted and finished like a fine box. But all was so dark that I could hardly see inside. I came away, gaping with wonder, walked down a broad avenue of steps a quarter of a mile long, crossed the river, and fell to work buying cheap lacquer as hard as I could.

On Tuesday we went to the shrine of the third Shogun. The gates are guarded by six giant figures in pairs. The first two are vermilion in splendid draperies, carved and painted to imitate flowered silk. The second pair are red and green, and stand on human monsters crouched on the ground. The third pair represent Thunder and Wind inside the gate. Wind is green with crystal eyes and a white beard, Japanese style. Round his neck is a carries a sword and like a

ls and rains, wind, rocks, and mountains. The whole is
t ten feet high. Thunder is red, with purple hair on
n locks like flame. Round his head is a glory of ten
s, with the crest in gold. In his hands are dumb-bell
sticks of gold. Under his feet are clouds and darts of
n lightning above hills and rocks. All around him
m tags and ribbons of gold and dress, waist-cloths, and
ties, and drapery. The whole figure is in strong action,
exceedingly well carved. In front of each figure is a
bronze tub and Lotus plant, very well executed, and
t five feet high. Thunder is Rai-gin: rain, Fu-gin.

come Ditara-ya-shan-no-odegari, and Kindara-ya-shan-
legari. Red and green people with spears, who stand
on each side of the next gate; their *pose* is natural and
and graceful, their features terrible, their dress mag-
nt and well carved. Abatsee-ma-ya-Shamiyo, with an
n his shoulder and wild-boars' heads for greaves on his
; and Marako-ma-ya-Shamiyo, with bows and arrows
with elephants' heads for knee-caps, guard the inside of
gate. The first is white, the second blue. The four
sent North, South, East, and West. All these are copied
Japanese faces, but all have long eye-teeth, for which
iarity, *vide* Darwin on Expression. They are meant to
rrible, and they certainly are grim guardians of the gates
e Shoguns' tombs. Inside the temple is a maze of lacquer
as, and gold and bronze and gold brocade, and mats and
se-vats and ornaments. Outside everywhere are groves
sterns of stone and bronze fit to drive a curio hunter

Two in particular came from Corea, and I believe
to be good Italian cinque-cento bronzes, twelve feet

high; Roman numerals are stamped at joints. The majority are Japanese. I sat me down to draw at one place, and gave it up as hopeless, and went back to the town and bought curios. I bought no end of tea-trays. Then I found the black lacquer and gold bronze doors of a burned temple, which I bought to make a screen. I believe I shall buy the rest of the lot.

Tell any of the family who have houses to consider whether they want enough of black lacquer to surround more than two sides of our dining-room in black and gold. I bought two screens of bamboo silk and silvered copper work, which hung in front of the Tycoon when he came to pray in the temple. They are magnificent. I bought vestments of gold gauze. At last I had spent all my money, so I could buy no more. Then the priests heard of us, and sent down things from their treasury. Marvellous pictures, luncheon-boxes of lacquer, a table, box, and inkstand of gold lacquer, the finest that ever I saw anywhere, for £60 the set. Paintings by Chinese emperors, china, spears, a sword 600 years old, a set of mouth-organ pipes for which the Tycoon pays a yearly stipend to the keeper, valued at £60, worth intrinsically 15*d*. In short, we might have emptied the Nikko treasury. But I had no ready coin, and I have no house wherein to stow such Japanese treasures, so I hardened my heart and bought no more. On Thursday it rained and snowed; we waited till noon, and while we waited temple treasures were brought to tempt us. At one we set off in the rain. At six on Saturday we landed here. The same three boys ran us the whole way out and in 180 miles. The others ran ahead of us. The way I

miles in ten hours and a half, with several stoppages amounting to two hours. They did not seem a bit tired, and ran up the last hill yelling like schoolboys out on the spree. They sang and danced, and drank sake all the time we were at Nikko. Their legs and feet are like those of Greek athletes, the Discobolus, for example, and I doubt if their matches could be found out of Japan. And so ended the trip to Nikko on Saturday at 6 P.M.; and so ends this long letter, which I will post in Yokohama to-day.

J. F. C.

By a letter received December 15, 1875, from my host in Japan, I learn that the trip to Nikko has become a common excursion, but that very few travellers have yet been allowed to go inland from Osaka. "A year is a very long time in Japan," he says; a few more years, and all that belongs to the past will have been swept away like rubbish. Many magnificent carved figures have been chopped up for firewood already and pagodas like those which I saw have been pulled down and sold.

No. XXVIII.

1, YAMITI, YASHIKI, TOKIO,
December 3rd, 1874.

MY DEAR MOTHER,

In a short time a whole lot of rubbish will be sent off. When the boxes arrive, open them and unpack. In one box you will find four bits of old brocade which will make you that dressing-gown. I got no more, and this comes from the temples at Nikko, that sacred place in the middle of Japan of which I wrote you in my last letter. In another box you will find an old flowered crape dress. It will give

you the shape of a Japanese dressing-gown. With the dress are three bits of the same kind of stuff, which were worn in some grand festival at Nikko. The white stuff is the crest of some Shogun (Tycoon). I should think that some garment might be made out of these. There are no dressing-gowns like yours in Japan. People sleep in wadded stongs with large sleeves, and velvet or satin collars, made of cotton, shaped like a giant's black dress coat. But the shape is not fit for European people. I can't wrap the tail round my legs. Failing this garment I bought all the silk I could get, and send it to execute your parting commission.

I have letters to the 4th, and your *Times* advertisement of the 1st October. I will write soon again. I only write now because it is a wet day, and I am full of my curiosities. I had great fun hunting them.

J. F. C.

Monday, Nov. 30.—A party drove from the capital of Japan by railroad to the treaty port of Yokohama, and there we dined. Our bill of fare is opposite. On Tuesday December 1st we returned from Europe abroad to Japan at home in Tokio. A very few years ago this would have been a difficult and a dangerous adventure. Many Englishmen were murdered on the expedition from Yokohama to Enoshima and Dributsum

1874.

ST. ANDREW'S DAY.

GRAND HOTEL, YOKOHAMA.

Bill of Fare.

DINNER.

Caller On.

SOUPS.

Cock-a-leekie.

Hotch Potch.

FISH.

Cod's Heed and Shoulders.

Spey Saumont

ENTREES.

Sing't Sheep's Heed.

Minch'd Collops.

Mutton-chops, wi' chappit Taties.

Shepherd's Pie.

Noix de Veaux aux petits pois.

JOINTS.

Brisket of Beef, wi' Greens.

Gigot of Mutton, wi neeps.

Bubbly Jock, wi' dorty brie.

Gusty Ham.

Roast Beef.

Roast Saddle of Mutton.

HAGGIS.

GAME.

Pheasant.

Snipe.

Wild Duck.

VEGETABLES.

Taties, Smashed, Boiled, Chappit and Baked.

Bow-kail, Neeps, Peas, Carrots.

PASTRY.

Minch'd Pies.

Carse o'Gowrie Aipples.

Blin' Jock.

Green Tairt.

Oat Cakes.

Short Bread.

Jellies.

&c., &c.

DESSERT ASSORTIS.

XXIX.

TOKIO, JAPAN,
December 4th, 1874.

MY DEAR —,

I got your letter at Yokohama on the 30th, and, after reading it, dined with the Scotchmen on St. Andrew's Day, and drank deep, sang and danced reels. We began at seven, and finished about four A.M. on the 1st of December. I need not tell you that a public meeting of fifty with speeches, was like the rest of its kind elsewhere. But it was part of the ways of that world which I came to see, and therefore interesting. MacVean, my host here, and Cargill from Edinburgh, the heads of survey and railway, wore kilts. I had a sprig of heather from the banks of Clyde given to me by one of the ladies, and wore that in my button-hole. I sang Gaelic songs; sat on the right of Sir Harry Parkes as second guest or third, and generally I was treated with civility and consideration and greatly applauded for songs. I got a letter from — on the same day; send her this to thank her, and tell her to send it on to your mother. This is Friday, and I really still am miserable from that dinner on Monday. On Tuesday I came back here and hunted curiosities all the way home. I don't know whether you have the family taste as strongly as I have, but I shall be ruined if I stay much longer. On Wednesday I went rambling all over the town again in parts unfrequented by the *gaijin* (foreign fools). I got rid of £5 in less than two hours and never in all my curio days did I see such room for *gaijin*. The country has been revolutionized; the *Buddhist* religion has

ceased to be that of the state; the dress of the better classes has turned European, consequently every second shop has some old cast off thing to sell, and the big ones are museums. I suppose that I saw a hundred swords in one shop all battered, but magnificent. Everybody wore two, now it is rare to see one "two-sworded man" in this great sprawling city of sheds and shops. The temples were dismantled; some were burned, consequently I find great carved beams, and gilt dragons and idols and images fit to make cornices of, going for a dollar or two. I could furnish a house with temple spoils and priest's vestments. Plain armour sells for five dollars a suit; I bought one for one dollar in a box. Fancy four shillings for a suit of armour! I bought a dress for one-and-six. (*It was valued at £8 when it got home.*) For forty shillings I have bought two-and-half pounds of silk which costs forty shillings a pound raw. My silk is woven into flowers and patterns of brocade with all the floss silk threads passing on the outside of the stuff; I have eight yards a foot and a half wide, and think that I have done well. I bought a box of moss agate mounted in ormolu and made in Europe, rather smashed but mendable for sixpence. I have bought no end of small old bronzes, having learned what to buy by looking at ancient temple furniture; I have not bought large things, for to send them home is costly and I can't afford it, but had I a house and coin, or a commission from somebody; or a taste for trade I could fill a large house with bronzes and enamels, and china and pottery, for every back street is a museum. I have bought six double folding black screens of lacquer with gilt mountings, just as they came from the temple of which they were folding-doors;

also quaint bamboo screens which hung in front of the Shogun's seat in the temple, when he went there to visit his deceased ancestors. But with all this buying, I am spending much coin; I don't like to exhaust my travelling credit, so I must stop and get out of this. Tell K. that I have failed to find Kramer, and get his seeds. Yesterday I sent a letter to the Legation to try to find the man and the Lillium *Kramerii*, but Scott, secretary of the Yokohama club, who does business in plants, tells me that this one must be propagated from bulbs, and that seeds are no good. How to send bulbs I know not, so I fear that commission will fail.

My own great entertainment is in the streets. On Wednesday, 2nd, I stopped my running coolie and stood for half an hour on a heap of stones watching a street juggler; he did a great many tricks that I never saw before, and right well: *e.g.*, he swallowed a tobacco-pipe all alight, drank water and fanned his stomach, and smoked at the mouth and nose. Then the pipe came out of his mouth and went in again, and was followed by more water, and more smoke followed. A great ring of children and grown people, men and women, stood round the performer, and then came tricks which I will not describe. Thence we went on to Asaxa, a quarter about six miles from this house. There we saw a regular child's fair at the door of a great temple surrounded by grand trees. Then we went to a flower-show. There were a dozen groups of men, women, and children; and ghosts, and junks, and Chinese sailors, and snow men and women all made up of long chrysanthemums chosen to suit the coloured figures. The faces and hands and small parts of the figures were painted on the chrysanthemums. The figures were very clever. The

man, frightened at the ghost, cowered in terror under a cloak of blossoms set close together as flowers on my silk. The snow man had a face to match and was a ball of white blossom at least ten feet high. Near him was a child dressed in a dozen colours, rolling a ball of blossoms about three feet high. The junk was fifteen to twenty feet high, and ten yards long. The sails all made of blossoms, and the crew dressed in them. I thought of K., and determined to make his mouth water. Then we went to a tea-house, and had a capital Japanese dinner with hot sake to drink, out of cups, and with chopsticks to eat with. This art I have learned and will practise when next I eat with you. Then we went to see the archery. There sat solemn parties solemnly shooting arrows at a drum target which sounded each hit. Beautiful damsels sat at each booth, entreating us to walk in. Some really were pretty girls, and their get up was gorgeous, but I am too old to shoot, so I went to the fair and priced a doll, and was called a Tojin Papa (Chinese) by a small imp. I made a face at him and gained his affection. Then we took to serious shopping in back slums. At each shop a serious grave crowd gathered round us, men, women, and babies, and now and then a policeman, with a long stick, drove them away. But nobody showed the least incivility or unkindness. Ten years ago men rode these streets escorted by soldiers, and murders and outrages abounded. There has been a revolution. At dusk we came on a shop devoted to making and mending family shrines. There they were from ten feet high to six inches, and down to half an inch, carved gilded, lacquered, elaborate devices, models of temples, snakes, Buddha, all the Japanese Pantheon going for five

pounds the largest. I bought two divinities for three shillings, and they are packed for home. Then, as I could see no more, we hailed three jinrikishas and as many coolies to draw them, and were run home for three shillings, about six miles.—This is foreign travel indeed! If I could but talk I should be happy.

I am now going to a duck-hunt with Yoshi and Katata, a mikado's chamberlain, and a prime minister to a daimio, his son, who has travelled. When I get back I will tell you how I got on. Ten minutes past the hour Noon. Waited till three; and then came my friends, Katata and Yoshi. We walked to the house of Kawamura, sub-minister of marine, and there drank tea and smoked. Then six of us got into two carriages, and drove two miles to a cross-road, where we walked up a bamboo-lane. Presently we came to a man squatted at a gate, with his hands in the attitude of prayer, who was the game-keeper. Then we went into a house and sat over a fire, smoking and drinking tea till a bamboo rattled. Then everybody ran out, and two Japanese with magnificent hawks came to the front. We went *pas de loup* to a bamboo-screened ditch with a turf bank on each side. Then the hawkers struck an attitude. Then two teal rose, and two hawks were cast off with strings to their legs, and in a jiffy the teal were clutched and gasping in the road. Then we went back to the fire. Meantime the men ran round the grounds, peeping through holes into ditches, and presently they pulled a string and rattled our carriage. This time everybody carried a net on a long bamboo pole. Three teal rose, and were captured, and the hawkers returned. They went back to the fire, and

noked till next signal. About dark we had nine teal, and went home in state. But first I had a peep into the big pond, which was black with birds. The manner of the sport is thus: the big pond, surrounded by tall bamboos, is never disturbed. Great geese and decoy ducks live in it, and wild teal come there to rest in the day. All round are grassy patches, with bamboo screens to peep through, and these are baited with seeds. Hungry ducks come there, and when they see they die. This morning, Monday 1st, McVean, Joyner, their wives and I, went to another duck decoy, which belongs to an old daimio called Karuda. His whole soul is devoted to sport, and he spends his days in duck-hunting. Before the revolution, he ruled a province and kept up an army, and lived in a yashiki in this town of Tokio. Now he is a private gentleman of good fortune, and a very polite, good-looking old man. His doctor and his apothecary, his cooks and hawkers, were present, and the sport was the same, and tame. We were there soon after even. About ten I went to help Mr. Black, the newspaper editor, to photograph the sun, and on the 9th we were to do the transit. Yesterday Mr. Joyner had me in to see an artist paint. He finished four panels in a couple of hours, each as big as a door. He covered them with wild geese and eagles, bamboos and pines, with marvellous ease and rapidity. He drew no outline, but worked two brushes like chopsticks in one hand, while he drank tea with the other. The doors lay on the floor, and the man walked over them, and drew upside down or any way. After that he drew figures on Japanese paper till dark. I went away to the exhibition. There I saw samples of Japa-

nese and foreign art, and beasts living and stuffed, till my eyes ached and my head swam.

To-night I dine with Prince Karuda, who has a lot of interpreters. Yesterday young Harry Black and his hawk captured three white storks and a mallard out in the fields in fair flight. Now I can see no more, so good-night.

J. F. C.

On one of these mornings Mr. Harry Black conducted me to the office of the Japanese newspaper, of which his father is editor. We walked to the Buddhist temple, in which the Jupiter of Tokio lodges, and walked thence through the main streets. My guide carried a magnificent hunting hawk on his wrist. It had no hood, and gazed about composedly at the sun and the crowds of people. The falconer followed. He was a Japanese gentleman, and looked like it. We were seeking a professional story-teller. He was off his beat, so we went on, hawk and all, to the editor's room, and the equivalent of the Queen's Printers. The compositors were on the floor, and they were all gentlemen of the soldier class in their national dress. They were Samurai, well-educated men of good family, employed about literature. The Japanese characters in use amount to thousands, and their number grows continually. When first the newspaper was started the editor asked a Japanese gentleman if he wished to have the paper sent regularly. "No, thank you, I have a copy," said the gentleman of the old school. The idea of a newspaper had not then entered into the popular mind, though they were very proud of knowledge. Now the

The Conservative municipality could not agree to let a foreigner live in the city outside of the established bounds. The editor and the priests had agreed to lease the temple, but the equivalent of the lord mayor refused permission. No foreigner ever had lodged in the quarter. The Radical Government solved the difficulty by taking the temple themselves, and they put their editor into it. There he makes photographs for his very interesting publication, *The Far East*. May his readers increase and multiply. "Sir," said a Japanese official to a public servant, "can you survey the Venus?" The Ordnance Survey did it; and this is the description of the proceedings, which appeared in the English part of the most Eastern newspaper in the world:—

THE Japan Gazette.

"The Transit of Venus, so long, so anxiously, and so universally looked forward to by the astronomers and scientific men of all civilized nations, made its appearance true to its time, and has become a thing of the past. In Yedo and Yokohama the day was happily everything that could be desired, and as our readers have already been told of the observations successfully made at Yokohama and its neighbourhood, by various observers, so we now relate that Japan did not allow the occasion to pass without having her observers at work at Tokei.

"Unfortunately she made no preparations until within the last fortnight. Magnificent instruments of the necessary kind had, however, just been received from home, for survey purposes. They are of the very best kind made for such uses; and though probably not quite so powerful as would be especially prepared for such important observations as

that to which they were applied yesterday, yet they were sufficiently so to make observations which will be of great value, as the contribution of Japan to the *congress* of scientists, to whom will be submitted all the observations taken everywhere, for the grand calculations of the distance between the Earth and the Sun.

"Although so short a time was left in which to make preparations, Mr. McVean, the head of the Survey Department, whilst officially notifying the Government of the great disadvantages they would labour under, as compared with those who had taken time by the forelock and got everything in order long before, yet set to work with great energy. Mr. Scharboo, who has been engaged for upwards of twenty years in the Meteorological Department of the British Admiralty, and who has been specially engaged for similar duties in Japan, also exerted himself, and, assisted by Messrs. Klasen and Cheeseman of the Survey Department, managed to get a temporary observatory erected, good solid granite foundation blocks placed, and the necessary instruments levelled and well adjusted on them. The Japanese officers were equally anxious to forward the operations, and thus evinced the true spirit in which Japan seeks to take her place among the nations. It was too late to have any proper apparatus fixed for photographing the transit, but two days before, Mr. Black having been requested to give his aid in this way, had cameras on the ground, and took the sun at intervals of from two-and-a-half to ten minutes, taking, in all, seventy images.

"The instruments used were a twelve-inch theodolite and a transit instrument; at which were, respectively, Messrs. Cheeseman, Scharboo, and Klasen. Mr. R. Stewart attended the chronometer. The observations taken by them were compared to the exact moments of contact of the outer and

inner edges, both in the passage of the planet on and off the sun's disc; this date we hope to be able to present in a few days.

"A most admirable picture of the transit, throughout its entire course, was thrown by means of a telescope on a sheet of double elephant paper, stuck on a Japanese door. This was suggested and entirely carried out throughout the day by Mr. Campbell of Islay, who, as a traveller round the world, happens to have been staying with Mr. McVean in Yokohama for some days. The telescope was on a stand placed in a box about six feet high, and the door with the white paper was in a little dark chamber about six feet square, made of a framework of bamboo covered with black paper. The box standing in front of the chamber, the eye-piece of the telescope was admitted into the latter through a slit in the covering, and being properly focussed, a beautiful image of the sun, fully three feet in diameter, was thrown upon the white paper, and the planet, when fully on, was like a round black wafer about an inch in diameter. At the first moment of contact Mr. McVean, Mr. Joyner, Mr. Campbell, and Mr. Lee, the latter a native gentleman connected with the Survey Department, were watching; and they saw the first contact some time before it was shown by the instruments, thus vindicating the advantage of size in such observations. The appearance of the planet as shown by the instruments was only about one-tenth or one-twelfth the diameter as shown on the paper. It was a fortunate thing for all visitors that Mr. Campbell was present, and had the forethought on the previous day to suggest the erection of this little "peep-show," as he humorously called it. To the numerous Japanese visitors who during the day arrived on the ground it gave at once a clear conception of what was going on, without

the trouble of applying their eye to any instruments whatever; although most of those who did present themselves were permitted to see what was to be seen with the more scientific appliances.

"His Majesty the Mikado, who was expected, did not visit the observatory; but His Highness Sanjo Daijin arrived about noon, and was evidently very much interested in the proceedings. As Mr. Mozer (who had kindly accompanied Mr. Black, to help in the photographic operations) was about to take a picture of the observatory for the December number of the *Far East*, His Highness very kindly seated himself in front, with a number of other Japanese gentlemen and others connected with the day's doings, and the picture was taken.

"Throughout the day, Mr. Mozer prepared the whole of the plates, while Mr. Black exposed them and took the time. The images are very small; but, if enlarged, from their continuity throughout the entire day, from the commencement to the close, they should be valuable, as showing precisely the course taken by the planet."

So here is Japan fairly started with growing railroads, and telegraphs, an ordnance survey, and an observatory; steamboats, a newspaper, and a national debt. A most ingenious set of mortals are planted in one of the best commercial situations in the whole world, watched by all the great powers. They make one of the most interesting of political studies, and are the queerest mixture of tragedy and comedy that a spectator can look at from outside.

Alloch.—Not long ago a lot of conspirators attempted to murder a regent, and in the most frequented open place in the city a great many were shot over a low bridge

into a moat and escaped death. The guards pursued the conspirators. One, the chief of them, seeing that he could not escape, and being a gentleman of high birth and properly educated, stopped and prepared to die. The pursuers, seeing what he was about, paused. They respected him, and waited whilst he solemnly and deliberately, and according to all the rules of the soldier's ancient code, put himself in the right position, and performed harikari—that is to say, he cut a cross in his own stomach, and gralloched himself like a noble Roman. That is the story that was told to me in Tokio, with many others of the same kind. That is the scene which I saw acted on the stage. A man who has made up his mind to die performs the gralloch ceremony. If he can, he sticks a sharp knife through his neck, exclaims "Now I die," pushes the edge forwards, cuts his throat, and dies accordingly.

Anybody who wants to know how these men live in Japan, and how they think, had better read a Japanese novel which is translated in the *Far East*.

Matters municipal, military, and sanitary, may be learned from that book. I had too much to do with Blue-books at home to look at Mr. Black's serious works abroad. It was better to hear him sing old Scotch songs like a born musician, and jingle Japanese ditties on a piano and denounce them.

Music.—Not being a taught musician, I cannot say much to the purpose about Japanese music. It is a cultivated science. Shops are devoted to the sale of the national musical instruments, and a whole class of girls are professional singers, musicians, and dancers carefully taught and paid at fixed rates. They come when sent for, play and sing, and dance.

They stick a lighted joss-stick in the shibashi (fire-box), and when that has burned away an idle hour, a fresh tune begins with a new joss-stick. These are the equivalents of professional singers at home—well-mannered, polite, proper young persons; but with a leaning towards sake and sugar-plums and fast parties. They would appear as “Bohemians” in a modern novel. I never noticed anything disagreeable about a Japanese voice, and I heard country folk carolling sweetly. But these instructed students of the Tokio schools of national art are taught to jingle and twangle and catterwaul in strange falsetto, quavering trills which did not delight but rather pained my ignorant Aryan ears. This was not natural music; it was a very artificial, carefully-taught, unnatural false performance. At Frisco the Chinese actors invariably squeaked. At Tokio the Japanese tragedians intoned in the same false key. The men who acted women at the theatre squeaked like mice; and the women who sang professionally all over the city squeaked like shrill shrew-mice at the topmost tone of their *voce di testa*. I thought Japanese music detestable. The musicians were amiable, beautiful, charming, polite, well-bred, well-taught, well-behaved, admirable young persons, whom I greatly admired. Nevertheless it was refreshing to hear that Scottish Lion of the Press roaring

“ Scots wha ha'e wi' Wallace bled ”

after the transit of Venus.

No. XXX.

YOKOHAMA,

December 11th, 1874.

MY DEAR J.,

You have been a great deal in my head of late, and your letter of the 12th October reached me to-day. You know the proverb. I thought of wanderings in the back slums of London (1845), of a queer green Dutch glass bought for a shilling, collared and carried off, and the despairing cry of the vendor, "Oh, do tell me what is that I have sold!" I thought of all these things, because I, bitten by you, and of that same kin, have spent fortunes in rubbish since I came here. I have just deposited a pile of boxes at the shipper's office, and home will go a miscellaneous lot as ever you saw. Nothing that I can write will ever give you the wildest notion of this country. It has been famous for curios for centuries, and now it is famous for fine modern work of all its own kinds of art. But it has gone through a great revolution. The Shoguns or Tycoons, who ruled the country in the name of the Mikado, were abolished. The Daimios, who were governors and nobles, lived in state in the capital. They were carried in state sedan-chairs, guarded by men in armour bearing flags and banners, and pipes and pikes, and gear of lacquer and Japanese make. They had armies of soldiers in quaint uniforms, and the whole place was like a scene in the *Arabian Nights*. No foreigner could live in safety then, and none can move now without a Government pass. But the Daimios and all their grandeur were abolished. Then the Buddhist religion and all its paraphernalia vanished too. Pagodas, hundreds of years old, and 100 feet high, were pulled down and sold for a song. Images were sold for fire-

wood, and there was a change to European ideas and dress, and hats and breeks, and then the old fittings went into the curio-shops. In this town is a whole street, and several back streets, full of rubbish. In the capital, where I spent ten days of late over an area about as big as London, are scattered shops in hundreds, full of old rubbish. I could have gladly spent more coin than I can spare. One shop I found full of piles of shrines, each fit to make your mouth water, gold, and lacquer, and bronzes, and images, and all going for a song. I went ninety miles up country to the tombs and temples and shrines of the Tycoons at Nikko. There I bought gold cranes and geese and fish on lacquer trays. Then the godowns (warehouses) and treasuries of the temples began to open, and things poured out in heaps. Pictures painted by Chinese emperors, swords 600 years old, pictures, tables, screens, bagpipes, things without name or use, curious beyond price. But what could I do! I left them there. What I bought you shall see—old copper pots and pans, kettles and candlesticks, that would furnish Wardour Street.

Oh, my beloved instructress in bric-a-brac! if you had been here with me, we might have made a fortune, or lost one. No wonder I thought of you.

Now I have got my pass, and on Sunday morning I am off again to travel 300 miles right through the heart of Japan, where globe-trotter never set foot before. I go by the Nakasendo road through the highlands, attended by a Japanese boy who speaks English, and otherwise all alone. We are here as far south as Gibraltar, but now the weather inland is cold. Japanese houses are all sheds, with sliding screens of white paper and bamboos for walls, and with wooden shut-

ters which slide in grooves outside at night. The floors are mats set in frames, and in the floor is a square hole lined with stone, in which is a fire of charcoal. We sit on the mats and eat rice and soups and stews with chopsticks. A heron's bill is the nearest implement that I can think of, and with it I pick up grains of rice and swallow them. The food comes in lacquer bowls, and the bowls make room for pads, on which we sleep on the floor. In the morning a tub is prepared in an outhouse, and there we bathe. Nobody cares about nudity here, and I am getting used to the dress of Eden. Our carriages are drawn at a fast run by men who, when they get hot, strip nearly quite. Then out come pictures tattooed all over their healthy brown hides. When we get in the coolies strip entirely, and bathe with open doors in the tea-house passages. I saw a man and his son in a tub the other day. A whole family were found in another bath, and one of our party stripped and joined them. Oh, but this is a queer country!

On the 9th I joined the surveyors, and rigged up some of my optical dodges to see the transit. I had an old telescope, with a paper umbrella at one end, and a bower of bamboos and black paper at the other. Within the bower was a screen of white paper, and thereon was an image of the sun about two-and-a-half feet wide, with the star on it as big as a sixpence. The minister of public works and the prime minister came into my bower, and the Mikado was coming. But some Yankees rigged him a telescope in his garden, and he sat there all day instead.

By another of my dodges, Mr. Black, the Delane of Yedo, took about fifty pictures of the transit, and I am to have an

imperial gift of lacquer for my services I hear. What I care most about was that I saw the whole transit, beginning, middle, and end, to perfection. But it was queer to be shut up in a paper bower with all these little great men who made the revolution which unmade so much, and gave so many curios to the market and to me at cheap rates.

Sir Harry Parkes offered to-day to present me to the Mikado. I declined, because I want to start and see the public of his country, and the interior of it.

If I get out of it some fortnight hence, the result will go home in another letter, and you may see that by applying at home.

Give my love to all friends who care for

J. F. C.,
The Globe-trotter and Vagrant.

NO. XXXI.

YOKOHAMA, JAPAN,

December 11th, 1874.

E., MY DEAR,

I got your letter at the tail of your grandmother's of October 4th this morning. So here are my thanks, and a story. I passed through a village some time ago, which was all hung with rows of lanterns, on which was the device "三首" I asked what it meant, and was told that it meant the story of three heads. Once on a time a tyrant daimio ordered one of his retainers, who was a good and faithful man, to be beheaded. That was done, and the head was put into a boiling pot. But the retainer had a faithful friend and comrade who cut off the tyrant's head, and put it into the pot with the other. Then the two heads fought a terrible fight in the pot and the retainer's head was victorious and conquered.

by the tyrant's knob. Then the faithful friend cut off his own head, and dropped it into the pot, and the two overcame the tyrant. The dots I suppose are the heads, and their tails pigtails, and the border is the pot I presume. The whole is the crest of somebody I believe, and the illumination was a festival. This is the queerest country I ever was in. Letters of this date will tell you what I have to say when they get to your grandmother.

I dine with Sir Harry Parkes to-morrow, and next day go back to Yedo or Tokio, thence to start for Kioto, 300 miles off, by an inland road, called the Nakasendo.

Oh, that I could speak, what fun I should have in this queer country! I send some dresses home, which will astonish you,

My love especially to A——, of the wandering tastes, and to your stay-at-home mother, and the rest of you.

J. F. C.,

Story-teller to the Family.

*Log.—Extended notes.—December 9.—Transit of Venus.—*The Sun's image on the screen measured roughly, 0m. 6350. the star, 0m. 0200. According to various watches and records in my tent, the following were the times :—

				Entrance.	
1. McVean	...	11h. 7' 0"	11h. 32' 25"	25' 25"	
2. Joyner	...	11 2 30	11 26 38	24 8	
3. Mee	...	11 9 30	11 39	29 30	
4. Scharbau	...	—	—	25 16	
				Exit.	Duration.
1. ...	3h. 23' 8"	3h. 51' 4"	28' 1"	4h. 44' 4"	
2. ...	3 16 47	5 45 30	28 43	4 43 0	
3. ...	3 24 32	3 47 45	23 13	4 48 15	
4. ...	—	—	25 42	—	

The manner of taking these observations was to say the least of it remarkable. An old telescope on a stand was borrowed from somebody. On the 8th, we drove off with it in three jinrikishas, and on the way to the hill from which we were to "Survey the Venus," I bought a black paper umbrella. The end of the glass was poked through, and the tube was made fast to the bamboo stick, with a string. A big deal box was pressed into the service, and on it this novel astronomical instrument was placed. There was no screw for moving the eye-piece. By dint of some trouble the sun was shot, and an image cast on a sheet of paper. The thing could be made to work, but the light was so strong outside that we had to keep the image small, and bright. A Japanese carpenter was got and by the aid of interpreters and pencils he was told what to do. No workman could be more "gleg at the uptak." In a very short time a bundle of bamboos appeared with a lot of black paper; and a dark chamber was set up in a trice, exactly where it was wanted. Inside of it, a Japanese sliding door was propped up, with a large sheet of white paper, and thereon the sun's image was cast. The contriver of this popular observatory took charge of the end of the telescope, and managed after some practice to keep the image on the board and in tolerable focus. But he could not see clearly and work the glass, and move the screen as the sun moved; nor could he read the time. Therefore friends came into the camera obscura, and crouched there watching the board, watch in hand. The hill was near the railway and trains snook it; the place was crowded and people tramped about and snook to the ground, and there were knocks; once

somebody overturned the umbrella telescope. The hand which held it got tired, and shook; and more than all the atmosphere over this low, marshy, hot plain was boiling. We could see the waves of air passing over the sun's disc in various directions making the edge of the disc of light bend and quiver, and wave. I had photographed the sun often, and we saw what a difficult job it must be for the observers at the legitimate telescopes. They shot sitting, we were taking flying shots. But our sun was so big and pale that we could all look him in the face without blinking and with both eyes, and so we saw remarkably well, all things considered.

At the expected time the observers began to count one—two—three—and we inside the paper house began to quake and shake with keenness. "I see it," said one. "No." "Yes." "Yes." "YES." There it was beyond a doubt, a growing stalk first and then a mouthful bitten out of the cake. "Take the time!" "*By George we saw it long before the other fellows,*" whispered one. Then the counting outside stopped, and everybody gasped; and then began the palaver. Meantime I was watching for the only thing that I hoped to see, and presently I saw a ring of light outside the star, and knew that there was a clear atmosphere about the opaque planet. We had seen the dark stalk grow, as the atmosphere of Venus approached the Sun, we saw irregularity on the junction of the two curves, now I saw the bright ring outside of the advancing circle, and I was content. Better men were taking times, to calculate withal; I had got my fact packed in the paper box all safe. There is an atmosphere about Venus, which refracts light and behaves as a clear glass bottle filled with any opaque matter does when in the same

position. On that fact those who will may build theories. "No sabe." I don't know whether people live up there, but the atmosphere makes it more probable.

The photographic dodge was often used while striving to make solar scales for the Light-House Commission, and for divers purposes. See vol. ii., Frost and Fire. It served well to record the progress of an eclipse. A photographic camera is stopped till the sun's light is greatly reduced. It is aimed at the sun, focussed for parallel rays, and fixed. A prepared plate is placed, and the cover of the lens is moved and replaced as swiftly as possible.

After waiting till the earth has turned the camera an angular distance sufficient to clear the sun's apparent diameter, the cap is again moved and replaced. Two images are thus impressed, and ten or a dozen can be made on the same plate, even of wet collodion, thus—oooooooooooo.

From the 5th to the 15th, according to the *Nautical Almanac*, the sun's apparent diameter was 32' 24". It was found practically that images taken at intervals of two minutes touched. Therefore the pictures were taken by Mr. Black and his helps at longer intervals. The negatives were taken with an old rickety camera, eked out with Japanese boxes to lengthen the focus and enlarge the image. This was the plan which I used July 15th, 1860, to produce the specimen plate which was carried abroad this time in hopes of getting some record of the transit made by this rude plan somewhere.

Mr. Black's negatives showed the star on the sun. I have
 the prints turned out. As the old saw says—

December 10.—McVean, Scharboo, and I, went to Yokohama, and called at the Mexican observatory. Señor Díez showed photographs taken with a good telescope and camera as large and sharp as those which are taken at Kew with a similar instrument. As the Japanese Government only asked their officers to photograph the transit three days before the event, it was impossible to fit cameras to telescopes, so my makeshift was the only resource at Tokio. The Mexican observer during the transit cast an image from his large telescope on a sheet of paper, and admitted a large number of Japanese spectators, who saw and were greatly interested. My audience included the prime minister and the minister of public works. What a lot of beef and beer we did consume at the Grand Hotel when we had done with the stars.

As the Chinaman says, "Can do." There be things that mortal men can do, even with very imperfect helps. According to my philosophy, it is best to do them as well as possible by honest effort, and leave the "Cannot." There is an atmosphere about Venus; and, so far as I can see, there is none about the moon, but "No sabe." I never shall know whether either or neither is inhabited. One side of the vexed question may seem more probable to men who have lungs which need air, but there may be creatures that live in sunlight on the moon who would be drowned in air as men are drowned in the sea. "No sabe." Therefore, let us feed grossly on beef and beer, and suffer ignorance, philosophically, like Britons and Don Fernando.

Friday, 11th.—Making up temperatures with diagrams, writing letters home, and sending off boxes of curios. (Some of these letters never got home at all.) The steamer was in

the bay going south; the weather looked anything but favourable for a trip into the mountains all alone. "Can do" and "Cannot" held a council of war and "Try" had it. The steamer sailed, and I stayed to dine with Sir Harry Parkes.

Saturday, 12th.—He had got me a pass from the Government, and I was free to make the best of my way by either of two roads to Kioto. I had found a servant, and as he was a very good lad, here is his name—Sagamoto Massanao. He may be heard of at the embassy where he is known.

Sir Harry and Loch had a rough time of it in China, as all who know history must remember.

"I am not in the habit of carrying arms; I have none; do you advise me to buy revolvers before I start?"

"If you are not in the habit of carrying arms, I don't think you need begin now," said his Excellency. "Her Excellency has travelled the same road with me."

That was enough. The only danger to be guarded against was a drunken Samurai. Such a man might suddenly draw a sword and cut at a stranger. Therefore, keep on the left-hand side of all sworded men, and look out for squalls. Sir Harry Parkes was perfectly right, as he commonly is on Eastern subjects. While the country was closed against foreigners, the people, in obedience to orders, took up those who offended by landing on the shores and carried them to the authorities. If they carried them in cages, they must have been cramped as I was. There are footpads and broken men and enthusiasts in Japan as elsewhere; but, taking them all round, nobody wants to hurt anybody. If a stranger goes off the prescribed line of country he is quietly stopped by a soldier, and if he is a foreigner he is sent to the met, at

Nikko, ran out of bounds in search of plants, and was found out by his hospitable entertainer, a provost or the equivalent potentate. His erring steps were gently guided into the right path, and I found him at the club laughing over his adventure. All who go to Mianoshta must have a medical certificate that hot baths are needful for their health. In short, Japan is not open to the public. By a rapid change, the old school are learning that something is to be gained by joining the rest of the world, and so with rails and telegraphs the ways of Japan are mending fast. The head of the Ordnance Survey cannot yet go a step outside of the city bounds without a special Government permission. Therefore, my thanks, due to his Excellency, are once more tendered. I owe him a great deal for hospitality and kindness, and good counsel. Above all I have to thank him for a Japanese document. Here is the translation :—

PASSPORT.

‘ Number 561.

“ ENGLAND, H. M. HORSEFORD,
J. F. CAMPBELL.

“ This person everywhere look about. From Yokohama starts. Either Nakasendo or Tokaido travels, and Kioto to get, and lake Biva to, and Nara if wish to go, and from English minister to foreign office writes. Therefore give passport. Must pass when shew this passport. Don’t fight, lon’t trouble.

“ 10th of 12th month, 7th year of Meije.”

Foreign Office seal.

Copied and translated by Massanao, my man, on a rainy lay at Shimonoshua.

With this I was free to travel. It was to be restored to the Consul, and returned to the Foreign Office. My squire had a similar document from the authorities at Yokohama; and so, thanks to our able minister, we were launched. I have said it before, and repeat here, that the "press gang" are the most amusing fraternity with whom to converse in foreign lands. It is their business to know everything; to get, to give, to buy and sell, exchange and barter knowledge. To a file of the *Japan Mail* and other Japanese newspapers I beg to refer all who want to know the atmosphere of Eastern history in which we lived at Yokohama. Readers of the *Times* and other English papers can see all about the row between China and Japan which was then coming to an end. The Japanese authorities informed themselves of the proceedings in England on the return of the expedition from Ashanti, and tried to give their men a similar reception. I did not see it; but I heard that all the paraphernalia of the ancients were brought out of the museum, and paraded; and that Tokio went back to her medieval times twenty years ago, and had a magnificent procession. Like a Lord Mayor's Show, it was partly new, partly old, entirely picturesque, and exceedingly quaint. The main point was that the dwarf had beaten the giant as usual. Japan, which got civilization from China long ago, had got better civilization from Europe, in the shape of artillery and breech-loaders and tactics, and being full of pluck and self-sufficiency, as all little people seem to be, Japan pitched into China and won. The white national heraldic game-cock, who is carved and painted every where, thereupon crowed with all his might and might have done nothing.

It so fell out that one of our lot went to see a review in Tokio. He got into the crowd, and being of Aryan stature, had a good view in a good place. He was opposite to the Mikado, who was in European-Japanese uniform. The march past began. A gun drawn by a lot of wiry ponies like those which ran at the Yokohama races, came up to the saluting point, and there a pony jibbed. Obstinate as a mule, he absolutely refused to move another step, and there he and his fellows, drivers, gun and all, stuck fast in front of the Emperor. There was kicking and thrashing, and the whole march past stuck. The ponies were taken away, the gun was shunted, and the rest of the army, blowing bugles, pranced and strode past the Heaven-born. Parades at Windsor are not much for size, but the quality is good. The muzzles of all the guns go past as if they were hard and fast on a ruled line. At a single bugle call, or a signal from the general in command, horses scour over the greensward like racers, men unlimber, fire rounds, retreat, advance, take up positions to circumvent enemies, and generally show what a British army may be like. The Ashanti parade was something to see, for it was real. They had won a hard fight. But that parade was a small matter to the game at war played daily at St. Petersburg. The Jap' fight with China was something real too, and showed the metal of this wonderful people. But the next topic in the settlement press was a row between Japan and Russia about the ownership of Saghalien, which is a long frosty, grassy coal-bearing island in the North. It may be found on the map of Asia, by those astronomers who care for politics. I don't. The end of that row was that Russia got the island, her astronomers saw the

transit, and the Japs sent a commissioner to St. Petersburg to arrange about a telegraph through Northern Asia. I went up the Red Sea with him. It is the business of foreign ministers to talk of anything in the world but politics. It is the bounden duty of their guests to avoid such topics. My host carefully told me nothing. But the "press gang" at Yokohama and my own eyes and ears told me that the islands of Japan afford excellent harbours, and must grow to be "a big thing," as they say on the opposite coast.

My passport, which was returned to the Japanese Foreign Office with my signature, says, "Don't fight, don't trouble." Dr. Watts sang:—

"Let dogs delight to bark and bite."

In accordance with this sentiment, the Japanese government requested the foreign soldiers, French and English, to go away; and promised to take care of the foreigners at Yokohama themselves; and the foreign soldiers went away accordingly. They also allowed this person "everywhere to look about," and took good care of him, and so he returns thanks to the gentlemen who honoured him with their presence in the camera-obscura at Tokio, when we surveyed the Venus together, and ate rice-cakes, shrimps, and sea-weed on the top of a knoll, and drank bitter beer. In return for that hospitality, I venture to remark that it is safer to bite a Chinese philosopher than a big brown bear.

STAR—13th December.—54°.—At noon started by rail and
 with McVean while my luggage and squire went to
 can be Arvon version of the name of
 principles,

where beef is largely consumed by Buddhists. It is much frequented by travelled Japs. Foreigners do sleep there, but contrary to the municipal code: my little squire informed everybody that his knight-errant was an officer of high rank, employed by Government, so my bed was prepared. By great good luck my French friend Paul Carry came to get the correct latitude and longitude of some point in Tokio, from the head of the survey. On comparing notes at Yamiti Yashiki we found that we were going the same way on the same day, so we agreed to join forces. After dinner, and a cordial farewell to my numerous kind friends, my host put me into a jinrikisha, and off I set in the dark. The Japanese language is very difficult; at all events my stock of it was very small. "*Say-you-can made*"—to the place wanted, was quite sufficient to start my pony, and so we started with a paper lantern at a fast run. But presently I discerned through the darkness that I was in a new country, going at speed between deep ditches, out in a marsh.

"*Dochera Say-you-can?*" where is the place wanted? was all very well as a question, but when the pony pulled up, and manifestly knew nothing about the place he had got to, it was vain to hope for an intelligible reply. A man with an intelligent cab-horse cannot say much, it's Say-you-can't. We were right away in the marshes, and in the dark, and I confess that I began to question the wisdom of being unarmed and to plan my battle array if it came to a fight, and I was turned over into a muddy ditch. On the whole I thought I could whop my Neddy, so I cried "gee wo" in Japanese and said "*made*."

A passing lantern showed a traveller in his carriage.

"*Dochera* Say-you-can?" "Jabber, jabber, jabber," came the answer, and my Neddy came up and went along till we pulled up at a police station, or at the head-quarters of a regiment, or somewhere grand. A very polite little officer came out, and presently by dint of *Dochera*, *Hotel*, *Englishman*, and other disjointed words, the matter was explained, and Neddy trotted off through the ditch country till he got to streets, and then to a back door. *Say-you-can? Ich. Yorashi! Atchera.* Yes. All right here.

So there I was in the dark, at the place. A few weeks before the space in front of the house had been a dry, bare, dusty waste. The Jap' gardener had moved a garden bodily into it, and there in the darkness I stumbled about amongst tall shrubs and small trees. The benevolent night-porter helped me to a verandah, a light appeared, my squire awoke, and presently I was stretched on an iron bedstead wrapped in my plaid with my head on a bag dreaming. A very little language goes a long way, and that little "Say-you-can" gave me good night's quarters.

Gulliver learned to converse with his sorrel mare when he returned from his travels. I conversed with my pony in Tokio. He said, "*Arigato*;" when I paid him; I said "*Saianara*," and he trotted cheerfully off.

"If I had a donkey wot wouldn't go,
Do you think I'd wallop him, oh no, no!
I'd give him some hay and cry, gee wo,
Come up Neddy."

On the 14th of November, before daylight, 37°. Hoar frost
on the 15th of November, before daylight, 37°. Hoar frost according to the

records shown to me, differ greatly at short distances. At Yokohama, near the warm sea, the air was soft and balmy. At Nikko it was far colder than at Tokio while we were away, and at Yokohama far warmer all the time. With this knowledge, I had come provided with a deer-skin, Samoyede smockfrock, with a hood, bought at Archangel, and there usually worn as a winter garment. After a good European feed, started as the sun was rising, with three jinrikishas, my boy, myself, and my traps. By the way, there are 250,000 jinrikishas in Tokio; 22,860 were built in the city in January, 1875. My French friend was ready at Mr. Ohl's house, but some of his traps had not arrived. I made a pencil-sketch.

The bridge leads into the castle over a moat. The wall is made of great stones, which face an earthen mound; on it grow strange gnarled trained trees, exactly like those which are commonly depicted and carved by Japanese artists. The house is the gate-house. Inside is an outer circle, with houses and barracks; within is the inner wall, the inner circle, and the state prison, in which it pleased the Daimios and the Shoguns to conceal their heaven-born Emperors, the Mikados, before the revolution. That freed the Divinity, and humanized him, and put him in uniform at the head of an army on horseback. All this fine bright frosty morning I had been driving through that army, going out to exercise, tootle-ti-tooing bugles, a dozen at once in different keys, marching and counter-marching, and bustling about like a swarm of ants in blue uniforms. There was something intensely comical in the whole thing. A couple of small, bandy-legged privates meet and recognise each other. They

bow double, and nod and grin, and rub their shins and their hands, and make speeches in the true national manner, for they are polite gentlemen.

There is nothing ludicrous about these pretty manners when the gentlemen are dressed as Japanese ; but when a couple of tiny brown boys in French uniform perform these ceremonies, it is hard not to laugh. The soldiers are as boys at school, but their souls are the souls of lions. The French gentleman's house was Japanese, adorned in excellent taste with Japanese ornaments, and with enough of European furniture to make it a charming residence. The owner was slightly indisposed, and I did not see him. From the door of the garden, at 8.30 A.M., we started, drawn by single men, who had bargained to run all day. As very practised athletes, they went at a good pace till dark. First, we trotted merrily through the streets, admiring the wild birds on the moats the market people hauling in their stuff from the country the trees of the castle, and the quaint Japanese crowd which had become familiar. One grove of pines is a "rookery" of cormorants. Then we got to the old sea margin, which is everywhere conspicuous hereabouts, and walked up the short ascent to the sloping plain, which extends about eighty to ninety miles to the hills. Over that we travelled all day through a rich cultivated country, well watered and thickly peopled, on excellent roads. A 'bus with a pair of horses met us. In a few years horses will take the place of men and these roads will be crowded with carriages. That is manifest. Most of the swells have European broughams and carriages, manned by Japanese coachmen, who are well paid for their services. But we had

"man-power" carriages. Presently a tandem passed us, going at a very fast run, the men yelling, "Clear the way" in choice Japanese. "That's our minister," said my comrade: "he is going to shoot pheasants." Fancy a gentleman in correct Parisian costume, with gun and gaiters, tearing along behind a couple of acrobats from the nearest circus in the Bois de Boulogne. "That would astonish the ladies," said I. "This would astonish them still more." There is my friend's baggage. He was no greenhorn, my French friend, but a regular good traveller and sportsman. He had been something big to a fur company, and he had seen a great deal of North American wild travel with trappers and Indians. He had lived where every man met might be an enemy, and every night's rest was in a guarded camp. Arrows had come out of the darkness to his fireside. His gun had been his caterer, and his own hands had served the dinner which they cooked and caught. But this old hunter had kind Aryan friends, as I had, in Tokio; and he was laden with gifts of grub, as I had been on my first start. There was the hand-cart going steadily on ahead, drawn by men, attended by the Japanese cook and the little interpreter, who spoke Japanese-French, and wore Japanese clothes, and was a gentleman student.

Here are our respective weights, ascertained later:—

J. F. C.	208 lbs. (191 lbs. when the journey ended).
Dr. Vidal	208 „ (a French gentleman).
Carry	183 „ (a sturdy, well-grown Frenchman).
Koiti	140 „ (a very big Japanese cook).
Kangaiama	121 „ (small interpreter).
Massanao	110 „ (my squire).

My squire and the French squire were average samples of the rank-and-file of the army which thrashed the Chinese; though the Chinese on board the steamers and in Western America were quite as big as Aryans. Here were the Bantams pitted against the Cochin Chinas. Here were little wiry imps hauling men twice their weight, and dragging cart-loads about, as if they were ponies, instead of polite little warlike ingenious men. The sooner they find fitter work the better. We halted at *Konossu*. The tea-house people would not take us in, for we were strangers and foreigners, under the old law, and out of bounds. "Ah!" said the Frenchman, "they counselled me to send for the mayor if anything of this kind occurred." So we went to the mayor. He or the provost came with our passports in hand, and bowed. "I am always civil to these people," said Carry, and he bowed. I also always strive to be exceedingly civil, so I bowed, and then we all bowed, hat in hand and hands on hearts, and the end of it all was that we kicked off our shoes, walked in, and camped on the tea-house mats. The mayor asked for our cards. My comrade had contrived a bamboo stretcher on cross-legs; he had a waterproof sheet and a tub of his own, so he took a long time to get to bed. A plaid, a bag, a pesk, and a "stong," served me; and the national hot-water tub of Japan was ready everywhere. I had positively refused to carry any foreign food, so my baggage was very light, and I generally was sound asleep long before the travelling gear was half rigged. The greatest bore of the travel is comfort, unless it be luxury. This night the inn was full of travellers coming from or going to town. The morning was bright and warm, and the harbor

screen covered with white paper. The black shadows stalked about our walls. The house found all in stongs and food. Stongs are cotton dressing gowns, thickly quilted with cotton, which travellers sleep in. I slept *on* them and under them in my own garments. Once for all, nobody suffered from any of the numerous pests that make foreign travel detestable elsewhere. House, people, garments, and food, were clean and neat and natty as a handbox full of dolls newly painted, with a toy-dinner cooked for fairies to eat. All was chatter and good humour in our suburban retreat while we kept awake, and the whole flock had fled before dawn. The first night was a fair sample of the series of nights spent in Japan.

Dec. 15, 36°.—Up before daylight and started 7.25 A.M. with single men. Travelled all day at slow rates till about 4.30. Halted at *Shimashi*. Tea-house clean and quiet. Approaching distant mountains, over a well-cultivated, rich, well-watered plain country, dotted about with clumps of wood in which were temples and farm-houses, and apparently houses that may have belonged to men of a rich class, like country gentlemen. It was precious cold, and every now and then we got out and walked. One notable set of people on this day's march were country coolies. They were nearly naked and walked in parties, each man carrying a pair of pails on a bamboo pole. These were rice-farmers going to fertilize their fields. We could wind them half a mile off, and so we got to windward of these agricultural processions when we could. As diet, rice seems to make strong hardy men. Oil or fat is supposed to be needed to keep the fire burning in human engines exposed to cold. These men eat rice and

beans, a very little dried fish, and sea-weed. Yet here they are scarcely clad, in a biting mountain wind, doing very hard work, and in grand condition. An English traveller came down from Yezo in great cold, and lived on rice and brown sugar for some weeks. He came in looking brown, hardy, and strong, and in excellent health. I tried the prescription and it suited me. We met trains of coolies coming from the hills to the town, each man carrying his merchandize on the springy pole of the country. The muscles on the shoulder were marvellous, and the men models of strength done up in small parcels. The weights carried were as wonderful as the pace, which was good five miles an hour, and a kind of trot. Straw sandals, clogs, lacquer ware, rude crockery, toys, cakes, dried fish, sea-weed, charcoal, radishes, packages of unknown merchandize; horse loads and man loads of silk, all manner of articles of trade and barter were carried up and down this middle mountain road of Japan. We had nothing to do but to sit and watch the stream and compare the men to ants for industry, and to beavers for carpentry. We were getting clean away from European influence, as it appeared.

I give no distances here. There are many Japanese maps lithographed on their excellent paper, or printed from wood blocks. On these all the stations and distances on the main roads are given in a tabular form. My squire had general orders to manage the travelling. My comrade agreed to share the food and halve the cost, and each in turn paid for the horses, sent the accounts, and got the "squeeze;" we were all very comfortable.

So far as the mountains were concerned, we saw nothing

to either of us. I can see the good-humoured arched eyebrows, and shrugged shoulders, and out-spread palms of my comrade when he twinkled his eyes and explained his views of "squeeze." We had just detected a landlady presenting two boos to Koiti his cook. We had paid her about eight shillings a night for the whole lot of five hungry men. "My faith, he is a great rogue, Koiti, my cook, but he is the best of them all, and to me it is well equal." I translate, for we spoke French, or we spoke English, and my comrade's English was nearly as good as his Parisian French. Now let me explain our view of "squeeze," for it is an institution all over the Asian coast of the Pacific and may spread. If a man goes to a shop with an interpreter, and buys anything, the interpreter goes back to the shop and has a squeeze out of the price paid:—just as much as he can squeeze. If he squeezes too hard he may spoil his own market. If the shopman, on the other hand, objects, the combined interpreters refuse to conduct customers to that shop, and take the strangers in elsewhere. If anybody brings merchandize to domicile the servants get the squeeze. In this case the person squeezed is the stranger, who pays high for cheap goods. If a man travels with a servant, the servant tells the landlord what to charge, and squeezes the landlord, who takes in the guest; so we were squeezed. If a man wants a military or factory contract he must submit to be squeezed and bribe if he wishes to succeed; to live, he must squeeze the man who eats the rations for which he contracts. It is good measure squeezed before the rice of the contractor arrives at the inside of the consumer, and he has to tighten his girdle and squeeze himself, because there is nobody else left to squeeze.

So squeeze extends all up and down the ladder of Eastern life. From the rice consumer, to the rice grower who grows taxes and must squeeze his own paunch, everybody squeezes the national bags. If you anywhere enter a bank fondly hoping to get coin of the country, as you do in Europe, you find a complication which is not easy to comprehend. The exchange is quoted at taels, or at so many Mexican dollars per pound sterling, or so many for francs. But Mexican silver dollars are merchandize; and they are of various sorts and values. No European can count Eastern coins, as I was told, therefore a Chinaman or a Eurasian, or some other curious being, called a "comprador," sits in every bank talking pigeon-English glibly, and counting on a small grid-iron strung with beads. To the comprador the customer of the bank is sent, with a note of nominal dollars, or taels, due to him, say for a circular note, sold.

"How muchee catchee? What you wantchee? No. 1 dollar? Can do."

Then the comprador does a little sum. He sells to the customer of the bank in which he sits, for the bank's order which has just been given for a home bill, a certain amount of money at a market rate, and with that equivalent for a circular note, or bill of exchange, the customer goes away wondering at this method of double entry. The comprador of the next branch of the same bank has refused to take my No. 1 dollars, served out as such by his brother comprador a few days before. That is "squeeze." These are Eastern institutions which are incomprehensible to Westerns. "No," I said, "but by induction and inspection of the wardrobe of the comprador, I have ascertained that the comprador, I

come to the conclusion that they must somehow turn a honest penny even within the sacred walls of Aryan banks. In Constantinople the money-changer sits in the street. In Jerusalem of old they sat in the temple. In the East they were at the banks. In Japan our servants sat on their heels and with their shibashi, warmed their fingers and squeezed me and my friend. "By my faith, I don't care," so long as I was fairly mulcted. That is a short account of the Eurasian system of squeeze about which we held a consultation on a frosty night in December 1874.

The *Japan Mail* of April 21, 1875, has the following article, which will serve to illustrate the excellence of that paper and amusing publication, and the inconvenience of the excessive squeeze in banking :—

A terrible tragedy has taken place in the midst of the community. On Monday morning last two of the clerks of the Comptoir d'Escompte, W. S. Swaby and V. Cantelli, were absent from their usual posts. Suspensions were aroused, the strong-box was opened, and a considerable sum of money (\$37,000) was found to be missing. Warrants for their apprehension and for that of a man named Adds, formerly a billiard-player at the Grand Hotel, were issued, and it soon transpired that all three had taken flight in a schooner which they had chartered and provisioned last week through Adds. The schooner had been well-armed, and as resistance appeared as early as possible, a steam-launch in charge of an officer and six men from H.M.S. *Thalia* went in chase. The schooner had not yet got under weigh at five o'clock in the morning, and the chase, having fallen, she lay becalmed in Kaneda Bay, not far from the port. As the steamer came alongside the schooner, Swaby and Cantelli went down into the cabin, reports of

fire-arms were heard, and the former fell dead with a ball through his heart; the latter, who lingered a few hours, with one through his head. At the inquest on the body of Swaby a verdict of *felo de se* was given by the jury. The result of the process on Cantelli's body at the Italian Consulate has not been announced, but it can hardly be far different. Adds is in gaol, and Withers, the captain of the schooner, on bail pending the inquiry which will be made shortly into the complicity of one or both of them in the robbery. It is said that the Comptoir will recover \$20,000 of the money carried off, but it is probable that their loss will be greater than it was at first estimated. The two men were in receipt of good salaries, but losses in the betting-ring and in gambling-houses were their ruin. The occurrence has given a dreadful shock to the settlement."

TORTURE.—The same paper explains why passports are still needed. Under the head of "Loafers," and "H.B.M. Consular Courts," and "U.S. Consular Courts," and such like, I see once more the loose fish of low society, the "gamblers" of Frisco, and the scum of the whole earth, drifting about the treaty ports, and hardly kept out by dams. Then rises up the trial of the carpenter in the play. How they kicked and beat and tortured the witness to make him speak truth; and then I am back at Nikko, holding a palaver on torture, as now practised in Japanese courts of law.

Our Parliament was held in a matted room of the usual kind and the language chiefly spoken was English. Mac provided a bottle of whisky and our host *sake-cups* to the messengers. Mac had beer to

America, sat on one side ; a Japanese gentleman, who had been to the Vienna Exhibition as commissioner, sat near him ; a Welshman, who had turned American, and could speak Welsh fluently, sat as best he could on his heels ; Mr. Smith, secretary of the club at Yokohama, was there ; and, so far as I can remember, Mr. Yoshi, a court official of high rank, who had just been round the world and spoke as much English as I spoke Japanese ; with him, his friend. Three Celts and one Saxon, and three travelled Japanese, and a great official, drank tea and toddy, and talked as hard as ever our tongues could go for several hours. At least four languages were going. One man was out collecting plants, another was sent out to report on the capabilities of the grazing country. He had calculated the value of the avenue of trees, their age, and increase of value per year, and the advantage of planting. He thought well of mountain pasture. A China fire-stand was brought for sale ; the commissioner pronounced it to be "emailie," a sample of ware made in Japan at a particular date, at a particular place, and rare. "Put a top on it, and you may sell it for 50*l.* in London," said the commissioner. McVean bought the china. Then came politics, and social science, and torture, and then began a curious argument worthy of European middle ages.

It is the Japanese custom and practice to torture a condemned prisoner till he acknowledges his guilt. No man can be legally executed till he has confessed. The argument was ably conducted for and against legal torture, and cases were quoted on both sides. As barrister, I simply stated the old practice and modern opinion of Europe. As traveller, I learned a great deal. Later on, I got to see what a mess

might grow if a foreign ruffian should commit some crime beyond the consular jurisdiction, and, being subject to Japanese law, suffer torture before execution by crucifixion or decapitation, with or without benefit of "gralloch" or "harikari." All the bears and lions and eagles of Aryan heraldry would pounce upon the Japanese game-cock and gobble him up preparatory to following his lead in valuable China. China might be broken to pieces, and the commerce of Asia go eastwards to Oregon and California by way of Puget Sound and the Golden Gate, if some patriotic loafer would only murder somebody, and get up a Japanese war. Having learned this local view, we felt flattered by the Foreign-Office recognition of respectability, and behaved accordingly. We did not want to be tortured. We had no wish to cause a Japanese war. We wanted to go quietly through the Japanese world, and so we went, repeating occasionally at steep places—

"Chi va piano va sano,
Chi va sano va lontano,
Chi va forte va a la morte."

I cannot remember half of the curious argument about torture, but here is the gist of the whole from the *Japan Mail* of three months later. I suspect that the writer was at our convivial parliament at Nikko, November 24, 1874:—

TORTURE.

(*Merioku Zashî*).

It is a greater evil under the sun than torturing
the wicked emperors of

China, such as Ketz or Chu, committed great crimes, but these were not so bad as torture, because they were committed only in person by the emperors themselves. But torture may be inflicted by a large number of officials, and cause continuous suffering to numbers of people. Though criminals are usually very common people, and their deeds are bold, they are arrested by the orders of the Mikado, and when so arrested they are tried before magistrates, the persons who are tried and those who try them being of very different ranks. Under these circumstances, even although men remain untortured, they are so terrified that they become beside themselves, and have none of that freedom which lawyers exhibit in talking about money stolen, lent, or the like, so that the innocent are often punished. But if the innocent are tortured, they will easily admit that they have been guilty of some crime, which is truly horrible.

"Assistant-judge Tamano, who coincides with me in this opinion, is also desirous of abolishing torture, and says, 'It would not be a task of great difficulty to make officials of the highest rank, or officers of the army and navy, to confess to any crimes by means of torture.' This shows that the injury done by torture is terrible. Though a person may be innocent, he will finally say he is guilty, because he thinks it better to die than to undergo torture !

"The Himalayas are the highest mountains in the world, and are situated in the centre of Asia. South and west of them is India and the Germanic race ; and over the ocean, westwards to America, the same German race. But north and east of these mountains are the Mongols and Chinese, and over the ocean again eastward there is the same race in America. Now, the Germanic race admits no torture, but the Mongolian cannot escape it. Oh, Himalayas ! What

manner of mountains are ye? Why do ye make of yourselves symbols of the distinctions of races? Why do ye make the Germanic race happy, and pass by the unhappy Mongol race? Hath not God made all mankind of one flesh and blood?

"In my middle age I passed through the Indian Ocean, and saw many islands inhabited by Malays, but I think that they are only modified Mongolians. But they were under the power of England or Holland, and therefore not subject to torture. The Africans are a black race, but those of them under European rule escape torture. Is the question of torture, then, one of difference of race or difference of knowledge? Neither in ancient nor in modern times is there anything worse than torture. Why cannot it be abolished? It must cease, or we never can claim an equal civilization with Europe and America. Nations will not form treaties on a basis of equality with us, so long as the custom exists, nor will it be possible for us to acquire jurisdiction over foreigners."

So we sat under our national flags, protected by all the grandeur of France and Britain. Who's afraid?

With a charcoal-fire in a square hole in the middle of the matted room, with a frame of wood over that, and a cotton quilt on top of all, my comrade and I used to sit with our legs under the quilt, sipping tea and coffee, and smoking Japanese tobacco, till it was time to break up our evening talks. Then he and his attendants laboured for their night's rest, while I stretched myself on the mats, and slept with as little trouble as a Samoyede.

Wednesday, Feb. 3.—31°—Water, frozen in the garden:
 up to the high stand of the river. After driving a short way,
 the road was very rough, and the horses were very tired.

road to *Tamioka*, where we took up our abode in the house of the French director of the Government silk factory. My comrade had an order from his countryman at Yokohama to use his house, and we were welcomed by his people and by Dr. Vidal. He has charge of 500 "moshmes" (Japanese damsels), many of good family, who work in this silk-winding steam factory. These girls earn six shillings—a dollar and a half—a month, and they are fed by a squeezing contractor. We walked most of this day's march, nine miles over foothills and the dry beds of torrents. In these were pebbles and rolled stones of quartz, mica-schist, porphyry, and hard slate. They indicate old rocks in the high grounds. The rocks near the road were soft and modern, dipping northerly towards the hills. In front of the house, N., 62° W., is the smoking snow-cone of Asamayama. It is always blowing off steam, and spitting ashes and dust, but it never has overflowed with lava since men remember. It seems to be a completed cone, like Vesuvius before the last eruption broke down one side.

Thursday, 7.—My comrade was very busy all morning preparing to observe the North Star, and ascertain the variation of the compass. Dr. Vidal was busy with his mail. We visited the factory, and saw 300 Japanese girls in one room winding silk from cocoons by the help of a steam-engine and hot water. Neat, fresh, well-clad, pretty damsels they were, bright-eyed, rosy, and healthy. There were few in hospital. They were under strict discipline of stern matrons and a fine old Japanese gentleman superintendent. Sacks in warehouses full of cocoons smelt of shrimps. After leaving the paddy-grounds of the alluvial plains, we had

passed through fields of bare bushes, about as big as gooseberry-bushes. These were mulberries, and the whole region is devoted to fostering silk-worms, which are boiled by the damsels, who unwind their silken castles. The whole industry has newly sprung up, or has been greatly increased, and is under Government, superintended by Frenchmen. The whole was a bit of Europe planted at the foot of the Japanese hills, and a credit to all concerned except the contractor, who starves these pretty girls, and deserves the fate of the silk-worm.

Modern Japanese silk fabrics are flimsy. Many articles sold at the ports as Japanese are said to be European shams. I bought none. The old fabrics are narrow and very rich and heavy brocades, woven in narrow Japanese looms before Europe got into the country and the market. Samples of this old silk brocade were to be found occasionally about temples and in rag-shops. The Mikado and his ministers still give presents of rolls of silk brocade to honoured persons, and these are quite as good as anything manufactured of old. The skill and taste of the genuine silk fabrics were greatly admired by good judges in England. Here the energies of all concerned were devoted to winding raw silk grown in the country.

After a very excellent European dinner, with a "tai" fresh from the sea to begin with, and good claret at the end, we sallied forth in the frosty air, and did some astronomy. An azimuth compass placed on a stand, a cat-gallows with a bull's-eye lantern, made the observation. The duty was to throw light on the string. "A little light on the string." "Très

"*Merci !*" Then we stuck pegs in the ground, and fixed the factory wall, and next morning we were able to go to the North. I suggested that we might walk about the lightning conductor was on the North Star, but that was astronomically objectionable, so I bowed to the opinion of La Place, and worked his lantern till I shivered in frost. From that night till we parted we did this astronomical business. Let me state the result. The variation very small, and seems to be affected by the volcano. It seemed to me possible that the friction of steam in the crater set up currents of electricity. Magnetic iron ore in the neighbourhood may also have some effect on the needle. The instrument was not of the best, but the astronomer and his assistant did all they could. The result will be communicated through the French minister to the Government by my associate, who told me all he knew. After luncheon our party walked twelve miles to *Shimonita*, a mountain village. It was a beautiful walk up a glen between steep hills, with masses of trees and temples on their sides. Till the law was introduced, these last were privileged. We crossed a steep col, looked down into a curious gully, and at strange hills of unusual shape. I made a rapid pencil-note, and understood the meaning of Japanese landscapes, which seemed untrue to reality. The nature of these rocks, and the action of heavy rain on soft and hard beds together, produce conical bare mounds, capped on the top by big trees, whose roots and branches shelter the ground, and hold it. The landscape is strange, weird, and fantastic. For the second time I found a countryman working amongst berry-bushes with the foot-plough. It is the very same

implement which is used in the Western Isles of Scotland by the "Gaidheal" there; and, so far as I know, it is used nowhere else. Here is a note of the Japanese farmer, using the very same action as a Skye man, and the very same agricultural contrivance, only better made. This is the "cas crom," or bent shank of the West in the far East a strange bond of union between the extremities of the old world.

We walked on to a very pretty village, and saw our traps and servants installed in a capital tea-house. Then we went out to see the shops. In one, exposed for sale, was a red-faced ape, with a rope round his neck. I thought he looked vicious; he was dead, and grinning defiance. Beside him was a wild boar, and we secured pork-steaks. Next hung a great flying-squirrel nearly two feet long, brown, with a long brush, and I believe a nondescript. His body was shaped like a conical bullet. Dr. V. bought him to skin and cut up and stuff and make a skeleton of for his native French museum. Followed by a lot of cheery polite Japanese boys and girls, we went on to a bridge and a burn; there I found slates, schists, and old altered rocks *in situ*. So far as I could make out in the dusk, the strike was N.E., and the dip N.W. towards the hills. In the street, raised on stone pedestals, were beautiful miniature temples, carved in wood,—one figure with a stag at his feet, we set down for "St. Hubert." We were told that he was a Kami of something. I suspect that he was a disciple of Buddha, but the plain wood seemed to mean "Shinto." Waters, the engineer whom we had come to see came to our quarters. The house was at night the floor was thickly covered with water. The water was very deep. An old lad-

splashed like a seal in a cauldron of hot water close to me when I was conducted to my hot tub. She did not mind; neither did I. A lot of jolly children made me very proud by playing tricks to the "Togin Bashi" (Chinese fool, or foreigner). They were quite tame, and rather like the deceased ape in the shop outside.

IRON.—*Friday, 18.*—*Shimonita to Matsuida, 12 miles.*—First we walked with Waters, engineer of the mine, to the works. We scrambled up a very steep hill-side to a boss of magnetic iron ore, which projected southwards from the hill, in a wood. A pickaxe whirled round and stuck fast in a cleft. My hammer stuck fast, and became a magnet, being steel. The compass wheeled round in all sorts of directions, as if bewitched. A string of keys stood on end and fixed themselves on the side of a narrow split. When men sit there, watches stop. Generally this was very like the Iron Mountain of Sinbad the Sailor. A worthy priest came there not long ago to offer rice to the "Kāmi," the genius or spirit or divinity of the rock. The rock pulled the iron lid off the rice-pot, which clattered against the natural magnet and stuck there. The priest fled in terror. I longed to get at the story, but I had got to practical men. Here was an iron-mine, and money to be made. So here were men quarrying the crop of the bed, and a smelting furnace was at the way-side, just ready to begin work with charcoal to be made out of the forests which make these hills so picturesque. Eleven months after that, in Lanarkshire, I saw what happens to a country where iron is smelted and dug. The legal proprietor of this Japanese estate was a cheery country gentleman, with whom his English engineer had learned to converse. Here

was another bit of Europe in Japan. Silk and iron and gold against myths; Venus, Vulcan, and Plutus against Kami. We took leave of Dr. Vidal and walked on up the waterside, in a very pretty glen with very steep sides, with fantastic rocks ahead. After six-and-a-half miles we got to a col, and there rested and tested the instruments. We went down, and saw that we had got round a considerable mountain, separated from the main range. The surface was a mass of yellow pumice and ashes, thrown over the whole country about sixty years ago by Asamayama. In the hill-sides are the edges of beds of basalt, overlaid by yellow volcanic beds. The general shape of this country is due to wearing by streams; the result, fantastic needles, peaks, and sierras, of which some rise nearly 2000 feet above the valley. Looking N.E. along the distant range where snow lay in furrows, the geological structure seemed to coincide with the dip and strike of the old beds found in the river. The range seems to be on the N.E. strike with a N.W. dip, with the oldest beds cropping out next to the plain. The great volcanic mountain probably is on a fault, and ranges with Nantai and Fuji San.

My comrade and his attendant carried sporting tools. In the evening the pheasants came out into the paddy-fields. There was a chasse, and a pheasant fell wounded into a clump of brush. I lit my pipe, and the hunters hunted in vain. Passengers stopped to ask what was up. I answered, "Pheasant-bird," and that had to suffice, for I knew no more. The interest was so keen, that we left him hunting the pheasant in the brushwood and walked on till we got to a larger town. There we found a large number of pheasants. There with

some trouble we found the rest of our people, and got lodged in a magnificent tea-house. It was much frequented by Daimios in the old times some ten years ago; now part of it is a school, and the rest was all our own for the night. All day long the road was hard frozen, and I, having a blistered foot, limped on the casts of former pedestrian sandals.

*Saturday, 19.—Matsuida to Kalruidawa, 14 miles; 2750 feet up, and 300 feet down; 36° at 8; everything frozen hard.*¹—Started at 9.—The curious jagged rocks passed yesterday, and the hill which we had recently gone round, were to the left, more than 2000 feet high. Walked up beside a considerable stream, six miles, to *Sakamoto*, where lunched, 750 feet up. My game foot, and shoes devoid of nails, kept me on the path. My comrade's boots and his hunting habits carried him off to hill-sides. Old experience of such hills taught me to expect that which presently happened. The sportsman returned to the path. He had got to cross gullies with exceedingly steep sides, matted with bamboo brush. Those who know the dells of Lanarkshire, and the fun of shooting there, may understand what Japanese walking is like, if they imagine every briar a bamboo as tough as a hempen cable, and as stiff as a small larch. There were no pheasants so near the road. I spent my spare time in sitting by doors drinking tea. At *Sakamoto* we had a better luncheon, and then put "the stout heart to the stae brae." At 2050 feet above Yedo we began to mount the *Usui Tonge*. In a mile and a half we mounted 950 feet, and

¹ On testing my glass at home it was found to read a degree and a half too high. I give the readings which I took, and leave readers to form their own estimate of climate.

halted to smoke. In one and three-quarter miles we had mounted 1150 feet in an hour. That makes the top tea-house about 3200 feet above the sea. At the foot of the pass facing the sun it was warm. Snow lay here and there, but camellias in full bloom made the houses and gardens beautiful. I longed to draw, I longed to be a botanist, but there was nothing for it but Excelsior. At the tea-house were hung up a deer, a bittern, and a magnificent mountain pheasant. He had a long, light-coloured, barred tail, white and brown spotted back, and a fire-coloured neck which was grey in some lights. Our larder was replenished, and we drank more tea. The way rose gradually along a ridge to the first snow-patch, which we reached at 2.45 P.M. The glass gave 2750 feet rise since morning, 4000 feet above the sea. We got to the top of the pass and a small village 4600 feet above the sea, 3200 feet from *Matsuida*, 2550 feet from *Sakamoto*, at the foot of the *Usui Tonge*—all by aneroid barometer unchecked. We had just passed the most renowned place in all Japan. It is a wooden shanty of a temple, with the usual shrine, and with paper prayers fluttering about the front on strips of white paper. Two giant red figures were the inhabitants. They were under repair, and their two heads were set in one place side by side, looking out over the plain. Their bodies and legs and arms were laid on the ground, and generally they looked in need of that mending which they were awaiting. There was something grotesque in the grave air of the two bald, red Japanese faces, looking towards Tokio and the sun. The shrine, as explained by the French boy, is that of the Kami of the cultivators of the soil. All this the French boy explained to us. The shrine was a simple structure of stones set up, with

inscriptions carved on them. One was read, "The morning prayer for Buddha." Another recorded that some one had there seen the moon. The pass is the gate through which generations of men have crossed from one side of Japan to the other, and the stones and cairns are memorials of their thoughts. One prayed; another, being a poet, quoted or composed; another set up a group of stone figures and an altar to Buddha and his favourite disciples, or to some Shinto Kami; and then passengers flung stones to record their prayers, and made a cairn. On the top was the temple, with a grated box for cash, which more generous passengers toss in after their prayers have been said. The cash are alms for the priests, and good works. The stones represent at least the labour of throwing them; the altars and inscribed stones all are good works; and good works, according to Buddhism, will themselves promote the workman in his next life. So this main road of Japan is lined with good works in stone, and wood, and paper. When the weather is clear, the view over the plains must be something like that which I saw from Pike's Peak at the verge of the Rocky Mountains. Having drank tea and *sake*, and having devoured bean-cakes at the mountain tea-house in the snow, we rattled fast down to our halting-place. On the way we met an old man with two grand cock pheasants on his back, of a different sort from any which I have seen, so far as I could make out. His gun was a smooth bore, and carried ball. It was a match-lock. The great smoking cone was to our right. In front was a cold, grey, cloudy, snowy landscape, that might have been in Lapland. We had got to the upland on which the cone grew. The dark-purple and indigo clumps of trees in the

hazy evening, telling against the cold, grey snow, faded into grey clouds, so that it was hard to tell where sky began and hills ended. It looked cold, cheerless, and dark. Yet this was Japan. The undergrowth was bamboo grass, and the trees and shrubs quaint and strange. Presently we came to a stone figure with a superfluity of arms, and I was puzzled. I have since got to understand that Buddha converted heaven and earth, so that all the Indian Pantheon were added to his disciples by his disciples. In like manner, as it appears, all the Japanese Kami, and all that was Shinto, became Buddhist till the revolution reformed Shinto and made Buddhism heresy. Even Christian images may be converted.

A bit of central Asia and a bit of India were planted in Japan of old, not far from two new bits of practical European Plutocracy, the worship of Iron and Gold. All day long we met or crossed crowds of travellers, and chapmen and traders. Some were coolies carrying dry sea-weed and fish and cakes; some were gentlemen carried by two bearers in cagos. There were trains of pack-horses in straw shoes; Samurai with long swords, countrymen, peasants, women, and babes. In short, it was a living Japanese panorama of native industry, pleasant to look upon, and a magnificent day's walk. We dined as best we could on eggs, soup and chickens, potatoes, rice and cakes, tea and sake, and orange-peel. Massanao Kangaiama and Koiti did their duty and earned their squeeze. We slept under piles of quilts, with the thermometer at freezing in our paper-house, after observing the position of the North Pole and the aspect of the Great Bear.

December. — *Kalruidawa*.—My comrade
write and look about, so he had for

the day. In the middle of a matted room with paper screens is a square hole lined with stone, full of burning charcoal, over that a cage of wood, over that a cotton quilt. With feet under the quilt, and book on the cage, wrote up log. Grey, dark, shady-looking morning, and precious cold. Two hunters came, and there was a grand palaver through the interpreters. It was agreed that they were to have a shilling each (one boo) and half the game, and a sum for any pheasant shown on the wing. They said that the top of their volcano could be made out in a walk of about twelve hours, but that now it is so cold up there that a man could not speak. The snow is deep, and covers holes in the ground. I thought so, and did not try the mountains. Sir Harry Parkes, who made the ascent, described the crater as very interesting,—a wide shaft polished by the continual escape of steam.

As this is a curious place, went out prospecting for idols. Found a rustic shrine in a field. The central stone figure, sitting on the heels, has a yellow cotton nightcap, and a yellow cotton shawl on the shoulders, four damaged lacquer cups are hung round the neck with a string, and some cash at the foot of the statue. I have seen many similar offerings about holy wells in Ireland and in Scotland. In the lap is placed a votive offering sculptured in black volcanic stone. On each side are two draped ornamented figures in an attitude of prayer, standing on pedestals of which the tops represent a lotus. A large stone lantern is beneath a ruined tree. The three chief figures are under a Shinto shed, that is to say, a structure of unpainted wood. A double line of stone images of Buddha and his disciples guards a paved path which leads to a small bridge over a streamlet. The whole struck me as

a curious bit of living worship, showing the mixture of Shinto and Buddhism with the worship of other powers. Near the place, by the side of the highway, is a mound with a large inscribed stone set up on it. It was "the morning prayer for Buddha," said one of the boys. There I sat, and with very cold fingers made shift to sketch Asamayama. As I finished, the hill vanished in clouds and mist. Walked back by the road and looked at a tall stone idol set up near a stream. It is draped and upright, has three heads and six arms, and two legs. Two arms are in the attitude of prayer, the rest hold various emblems. My knowledge of Hindoo idols did not suffice to identify this one, but manifestly it is of Hindoo origin. I found out its name later. Went back to our village and through it, and then with still colder fingers made a rough pencil-sketch of a stone inscribed. Great numbers of quiet civil people passed me; countrymen with pack-horses as usual, two-sworded Samurai, and travellers on foot and carried in cagos.

I noticed this day, and throughout my Japanese rambles, that Megalithic structures abound. I saw no stone circles anywhere; but single stones of large size are very commonly set up in conspicuous places, and they are generally stepped in a hollowed block of stone like the blocks in which stone crosses are planted in the Scotch Isles. Something in the nature of steps, or a rude square inclosure, generally surrounds the stone, and it is commonly inscribed. I could find no one about the settlements or in the country to give me any definite explanation of all these idols and emblems and monuments. I did all I could to set me on the trail. I suppose that many of the idols are remnants of the old religion of the

Japanese, upon which Buddhism, as imported from China, was engrafted.

"SHINTO" was declared to be the religion of the state not long ago. I could find no one to explain to me what Shinto is. But so far as I was able to get at the ideas of my interpreters and servants, it seemed to be the worship of the powers of nature and, above all, of ancestors. The Mikado represents a sacred family said to be "heaven-born." Shinto is his state religion, and the people still consider him to be a divine personage whose ancestors are Kami. Hatchiman is an historical character, whose history is recorded in Japanese works. He was a great general who died some few hundreds of years ago. But this mortal has acquired the attributes of Hercules. Many temples are dedicated to him, and many pilgrims resort to them. In some are deposited the swords, bows, and armour of famous warriors of later date. The right thing to do is to drink *sake* at the temple, to make the votary strong and courageous. Feats of strength performed by votaries who lifted great stones, are recorded on the stones, which are set up as a memorial. A medicine-box has the figure of Hatchiman carved on it; and that figure is commonly painted on lacquer-ware medicine-boxes which are slung to waist-belts.

Mine is a grim gentleman, with moustache, and a kind of Phrygian cap of liberty, dressed like a Daimio contemplating flights of retreating cranes. In short he is the apotheosis of that which would be called muscular Christianity in England. He was a strong, brave, healthy man, and he has become the "kami" of strength, pluck, and health. But as these qualities existed before this particular worthy, I suppose that

other older worthies of like character have been promoted in like manner elsewhere. Grettir, the strong man of Iceland, according to this Japanese set of facts, is not "the sun," but was a strong man, like "Hatchiman." So, I suppose, were Hercules, and all the other strong characters in mythology, and in national epics. If Buddha, who was a real man, has come to represent absolute Repose, the other ancient worthies and ancestors have come to represent active qualities which raise men in human esteem, and raised them to honour after death in the working world. Hatchiman represents action, Buddha rest. But as ancestors are worshipped they rise in the estimation of their descendants to the rank of kami, and to rule the powers of nature. Amongst the giant figures which guard the entrance to the tomb of the sixth Shogun at Nikko I have described the Kami of Thunder.

At Balgone, in East Lothian, are two bronzes, which were sent to a treaty port for sale, by a Daimio, who then wanted funds for a war with a neighbouring Daimio. An officer who saw them unpacked, bought them and sent them home. They are the best samples of that sort of Japanese art that I ever saw. The two vases of bronze are about three feet high. The stands represent rocks overgrown with small plants, like the stands upon which shrines are commonly placed in Japanese towns; on these rocks are small models of Japanese houses, and they mean a mountain, somewhere. The base of each vase is supported by open work of the foliage of pines and plum-trees, and the usual subjects of Japanese art. That is a bronze rail like the wooden rails which surround the shrines. The body of each vase is encrusted with a pattern of figures more than four inches deep. On or

side sits an eagle by a waterfall, beautifully worked, with the conventional waves and spray of the Japanese artists. On the opposite side are figures. One is a man in Japanese armour, with the usual sandals, but with a conical basket-work helmet of unusual shape. He is pointing a lighted torch at the snout of the conventional Japanese water-dragon, whom he has vanquished. He has horns and the long beard of some Japanese fish, ears, scales, a mane of spikes, and all the usual trailing folds and curves of the favourite water-dragon of Japan. He seems to be a cross between an alligator and tribes of Pacific fishes.

Hercules slew a hydra in a marsh ; I have been in the cave, close to the source of a stream which starts from many strong limestone springs, or "well heads," in Greece. This Japanese worthy is doing the work of Hercules.

A five-sided star-fish, surrounded by five leaves and as many double curves, frequently repeated, probably make the heraldic device of the family to whom these vases belonged. The "key pattern" occurs on the rim, above and below. The companion vase is a similar composition of landscape, foliage, birds, and figures. The human figure is in a ruder dress, apparently a dress of skins, and he has conquered the Kami of Thunder.

He has the same wild demon face and flowing hair as Thunder at Nikko : he holds the same dumbbell drumstick in his hand, and near his head is part of a glory of Drums, like the ten which surround the head of the Nikko image, and, like them, adorned with some heraldic device. The vases are wonderful works of art, for they are bronze castings : I saw nothing to equal them in Japan. But my point is that some

hero has overcome the God of Thunder in this bronze myth, while another has vanquished the water-dragon with a torch. The giant has beaten Jupiter ; Indra has beaten Ahi ; the man has overcome nature. My reading of this myth is that these ancestors, promoted like Hatchiman, would, by one more step in promotion, become the equivalents of Jupiter or Thor and govern thunder, and that Jupiter was an ancestor before he became Jove or Indra. These Japanese idols and offerings seem to explain the growth of myths simply and naturally. Holiness, abstinence, wisdom, swiftness, strength, and all manner of human qualities which men admire, come to be represented, either by an ancestor who was promoted to be a Shinto Kami, or by one of Buddha's disciples. One of these who had a long head, and could remember his master's sermons, became a definite shape, and is the apotheosis of Memory in Buddhist Japan. I have often seen his image in London shops. I only learned his story on the Nakasendo.

I had worked hard at comparative mythology while collecting the popular tales of the West Highlands ; I never could trace the descent of the sun to earth by degradation, till he became a frog, or a pebble, or Boots, or Aladdin. I found in all Aryan myths that the weak and despised rise ; that the youngest,—Boots, Askofis, Cinderella, Aladdin, the black, rough-hided peasant drudge of the West Highlands, and Grimm's little German tailor—all rise to be Princes ; and now in Japanese art I found the very same idea in the promotion of a Prince to be Divine, in the promotion of a General to be Divine, in the conquest of the Kami of Thunder by a Prince of the Dragon. Jotun, the god of the sea, had divine

honours, and even Napoleon the Great has become a myth in France.

"There are sermons in stones."

Such-like were my Sunday cogitations out in the cold, at the foot of Asamayama, amongst these rude stone idols of many heads and many arms, and strange forms planted on mounds, in groves, by trees, and streams, and rocks and stones. I seemed to have got into the nursery of myths which I had gathered on the other coast of the old world. I seemed to be in the den of Heathendom, with the ancients.

My comrade shot five beautiful pheasants, and saw nearly a hundred. The men showed him the birds on the wing according to contract, and seemed exceedingly entertained at the absurd idea of shooting in the air. But when the sportsman really did floor the birds, they did all they could to scare them away, and finally led this terrible foreigner out of their preserves into the road. I suppose that the snow had driven the birds down into the flats at the foot of the hills. Koiti had his work cut out for him, and we feasted.

Monday, 21.—When we rose at daylight nine inches of new snow covered earth, trees, grass, houses, and path. It was a white world. My landlord brought some sword knives, and crystal balls and other curious things, and we had a deal. Then somebody gave me a beautiful sugar cake in a box worthy of Paris. It really was a work of art, with a landscape, trees, and a waterfall on the crust. It got broken to bits before it got far on its way, but here was "a Christmas box." I put on heavy boots, and we marched ten and a half miles to *Odai*, a small place, where we camped in a tea-house. We

halted for "tiffin" at *Oiwake*, which is a large village with a magnificent tea-house ornamented for Daimios; painted, papered, and carved.

We got in at 3.30. The day's march gave us a good view of the volcano. The cone has a smoking, steaming, roaring crater at the top. To the west are two remnants of old craters, in the position of Somma to Vesuvius. The inner fragment is much furrowed by streams, the outer and older still more. The cone, which was in eruption about sixty years ago, is hardly furrowed at all. Deep ravines near the road give sections of yellow volcanic ash, which was largely thrown out, and to a great distance, within the memory of grandfathers. The mountain, covered deeply with last night's snow, and with its white plume of steam, was beautiful. We descended about 600 feet, and the cold was far less. Our luggage travelled in jinrikishas. The men ran nearly naked. One had a loin cloth, a handkerchief round his head, and a pair of straw sandals. He skipped through snow halfway to his knees, dragging his carriage, grinning at the fun, and defying frost. Truly these little imps are grand, hardy men, worthy of better work.

Tuesday, 22.—Start at 9.30; 30° ·27·100.—Camped at a poor tea-house much against the will of our men and to the detriment of Squeeze. Fed like kings on pheasants and eggs, and tea and *sake*. Carry made the variation nil. The road turns the base of Asamayama. The long slope, much broken by torrents, is to the S.W., as is usual in the northern hemisphere. I counted eight points on the slope, like small Sommas. I could not make out whether these are broken
The morning was

bright and cold. At *Ewamarata*—a small Daimio's town, with a stone rail at each end—I made pencil-sketches, which I washed with colour to save them at *Mozizuki*, where we halted early, at 3.30. Walked eleven miles on very dirty, sloppy roads.

MYTHS.—Let me beg readers to accept what I say about Japanese myths and mythology with caution and benevolence. It had cost me more than fifteen years to collect the popular myths and ballads of my own country, where I know the language, and where I am known. In Japan I did not know the language, and my interpreters knew my stock of languages very imperfectly. I had all the usual difficulties to surmount, in striving to persuade these people that I was not laughing at them, but honestly seeking to learn their ideas and their legends. Such small knowledge as I had gleaned from books could be of small value in a country which was closed against the rest of the world till it was opened with big guns a few years ago. Above all, the ideas of mountaineers on such a new track were so difficult to glean in the midst of other work, that my Japanese harvest of stories may turn out bad grain when threshed.

In the *Japan Mail* of April 24, 1875, in a budget of Japanese notes on Buddhist mythology, I find information for which I vainly asked in December, 1874. The foundation of a classical dictionary of extreme interest to comparative mythologists is laid.

For example : “Mari-shi-ten is the great patron of all persons young or old, learning writing, reading; dancing, singing, or a trade. The common form of this idol is a figure standing on the back of a galloping wild boar. It has six arms and

three faces. The boar being the last of the twelve zodiacal signs, and preceding the first sign, Ne, on repetition implies before the beginning—the three faces and countenances tend in all directions. The six hands denote dexterity at all work. The day of the boar *Inahi* is the day observed in his honour. The Nichiren sect chiefly affect this deity."

This appears to be the draped stone personage whom I found on a hillside on this pass, and did not know.

"*Shichimen* (Seven-headed Serpent).—At Minobusan in Koshu, Nichiren-sho-nin canonized this monster. Sick people or petitioners for good fortune visit the numerous shrines that are erected throughout these islands on the model of the above. Water and earth from the small artificial lakes always to be seen in the temple-grounds are considered certain cures for all ills; the water as internal and the earth as external medicines. Only the Nichiren followers believe in the efficacy of these things."

Here is the dragon of western popular tales; "Shesha Nāga" of Southern Asia: the benevolent seven-headed cobra of "old Deccan days"; one of the chief characters in Indian epics; one of the chief subjects of sculpture in Ceylon and elsewhere in Eastern Asia. I suppose that he is "Ahi" whom Indra slew in the *Vedas*. But according to Japanese mythology the hero who slew the serpent was *not* the Sun personified. At page 121 of *Japan Illustrated* I find—"The sun is the eldest daughter of Izanaghi et d'Izanami, and from her descend the Mikados, of whom the first reigned 660 a.d." Nowhere in print have I yet found the Japanese dragon-

known to everybody in Japan. The sun is a woman, in the *Edda*.

"Sun that wist not
Where *she* her hall had,
Moon that wist not
What power *he* had."

GYLFI's *Mocking*, p. 9.

"The man who is named Mundilföri had two children; they were so fair and free that he called one of them (the son) Máni (Moon), but his daughter Sól (Sun), and gave her to the man hight Glenr," &c. (*Ibid.*, p. 11, Dasent's translation, 1842.)

In Gaelic also the sun is feminine, and appears to be the shining lady who is won in popular tales by a human hero.

I have read and thought a great deal about Aryan mythology and solar myths, and I have arrived at the conclusion that we all have a great deal to learn. Some day I may repeat the lesson which I have learned, for correction by other scholars in this school, which lacks a master able to teach everything.

SKETCH OF A BUDDHIST SHRINE.

This shrine is a sample of the kind which we pass continually; but all differ, and each is a picture which I long to paint. Generally a mound, or a rock, or some rising ground by the wayside, is crowned by a group of quaint, picturesque old trees, or by a large grove. Up the slope rises a flight of stone steps. At the more important shrines these are considerable works. At the top are lanterns and pillars and rude inscribed stones, and some idol or other sits in the middle, flanked by figures in the attitude of prayer, or by inscribed stones. I am constantly reminded of "high places"

and "groves." But with all this multitude of shrines and idols, I have not seen one single worshipper since I left Tokio. I suppose that the "groves" and "high places" were sacred first. Signs of the worship of trees abound. Fuji San is a sacred "high place" still, for the mountain is a place of pilgrimage. All round *Nantai* are temples on high places. The graves of the Shoguns at Nikko and Shiba are on high places. *Nantai* itself is a sacred mountain, and there is a high place where unlucky swords were solemnly thrown away. There they still rust—a curious pile of bloody records, cast away as their owners hoped to cast away the evil of their bad works. Then, as I suppose, the religion of Buddha, introduced from China, took up the ground of the older and wilder religion, and priests and votaries planted images in the groves and high places where the old Kami were supposed to become Buddhists. Then came the late revolution. The Buddhism of the Shoguns fell with them; Shinto of the Mikado was declared to be the religion of the State, and the State took the Buddhist temples and turned them into schools, wherein to teach the secular wisdom of the West. In 1841-2 I saw churches in Rome crowded with worshippers. In 1873 I saw the same churches empty. There had been a revolution—a rebellion against priestcraft, and a swing towards general disbelief, which appeared everywhere in Italy. So in Japan the stone images, which are not worth anything in the market, are left out in the cold, while many bronze idols and decorations were sold to be melted into tempoes, and used to buy guns and uniforms, to enable the nation to go ahead. The advent of the foreigner has been a terrible one, and he collected a great deal. It remains to be seen

what structure is to be raised on these ruins. Something must grow out of the Italian revolution ; and out of the Japanese smash.

BUDDHA.—Meantime there sits Buddha carved in stone, with his back to the great white volcano in its robe of snow, with the plume of steam facing the noonday sun at the western end of a Daimio's town, in which there is no Daimio left.

The sacred image is on a sacred lotus, holding a lotus in his hand, contemplating. He is raised on a square structure of two stone steps. Stone lanterns are there to hold lights, and a stone pillar inscribed. Carry, my French friend, was testing his azimuth compass by the head of Buddha ; and Japanese travellers, in the blue and white striped cloaks of the country, waded through the snow on their way through their fields to their farms. They scarcely noticed the foreigners, and took no notice of Buddha at all. Now what does this stone image mean ? From all that I have read and gleaned it means shortly this : Some hundred years B.C. a prince determined to abandon his rank and turn preacher, monk, and mendicant. He saw that old age, disease, and death, were the lot of mortal man. He felt in the tropics that action was an evil, repose a great good. He went out into the world, and preached a new religion. He taught that men were not mortal. When their bodies died they lived again, and they rose or fell in the scale of creation according to their deeds done in each successive body. The lowest man by good works might be born again a prince ; the prince might die to awake a "Nat"—an inhabitant of a better world. The "Nat" might rise to be a "Brahma," or to anything higher, if

anything was higher in any Pantheon. But the crowning step in promotion by good works was to be born on earth "a Buddha," and to die and attain "NIRWANA." That was rest after work magnified to the utmost. So far as I can discover, that means final Rest—Death in Life. On the other hand, bad works condemned the evil doer to descend in the scale, and dragged him down by their weight. The prince who had done ill might be born an elephant groom, or he might die to awake a demon. The demon or the wicked man might get into a great seething cauldron, where he boiled for thousands or millions of years like a grain of rice. At long, long intervals, his head comes out long enough to utter three words of a prayer four words long, but till all the evil was boiled out of him the end of that prayer could never be said. Once said, the purified evil-doer got out of this infernal rice-kettle by his own exertions and had a fresh start. But so far as I can discover from books and talks, the greatest evil in this system of philosophy is Life, and the greatest good, Death, or a Dreamless Trance. There sits Buddha figured in stone, turning his back to the volcano, which may have been taken for the infernal chimney, facing the noon-day sun, with lights burning before him at night. But the idea intended and expressed in all the images of Buddha that ever I saw at Astrakhan, in Ceylon, in China, and Japan, is entire absence of mind; the perfect repose of death in life, the "Nirwana" of doing nothing, wanting nothing, caring for nothing, being nothing. Surely this is the dream of a lotus-eater, or an amiable eater of poppy-heads, or the votary of soma or *sake*, or any other soothing narcotic. It is the philosophy of a man who is not being nearly at the principle of Buddhism.

as explained by men who have studied the philosophy of the subject, and as understood by me, it remained to see how it worked. For that end I got a lot of books from the Indian Museum, and read Buddhist stories to see what works were considered good. The giving of alms to a priest appeared at every turn. The filling of a mendicant's bowl with rice was sufficient to promote an evil-doing, low-caste man, to be a great Rajah. It was a meritorious act to abstain from the seven deadly sins, but the man who had committed them all might outweigh the evil by casting rice into a priest's bowl. Over and over again this chief virtue shone through the incidents of Buddhist legends, with the opposite vice. One ill deed done to a priest outweighed a lifetime of virtue. In all this philosophy I never could find a Rewarder or Punisher. The man's own acts degrade him, or promote him to be a Buddha, who attains Nirwana by living out his last holy life. There have been at least five hundred Buddhas, and a new Buddha may be born any day. Experts will know him by marks. So far as I can make out a full-blown lotus flower ought to be figured on the soles of his feet, and something of the kind on the palms of his hands. So far as I can find out there is neither beginning nor end in this system of Buddhist cosmogony, devoid of theology, and ending in endless repose. It seems pure materialism. As tending to promote virtue and discourage vice, this is a grand philosophy in principle. Practically, it seems to have degenerated into a tax on industry for the support of idleness. A practical age abolished monasteries in Italy; an echo of the deeds of the West rang through Japan; Buddha gave place to Shinto, and Buddhist priests burned temples

to preserve them from desecration. There was no persecution. The passive mood became active, and the working world passed the stone images, and left them where I saw them, out in the cold. The taxpayers had enough to do in paying for all the new-fangled activities which danced into being when the change took place; the rice-farmer has to tighten his girdle and work harder than ever, to build factories, telegraphs, railroads, ships and steamboats, and to pay soldiers to thrash the Chinese. He has no cash to spare for priests, and monks, and nuns, and privileged temples; so priests are forgotten, and the images of Buddha have no worshippers in these Japanese hills. It is not always so. At certain seasons festivities are celebrated at certain shrines, and then there is something like an Irish pattern—men come to pray and stay for a jollification.

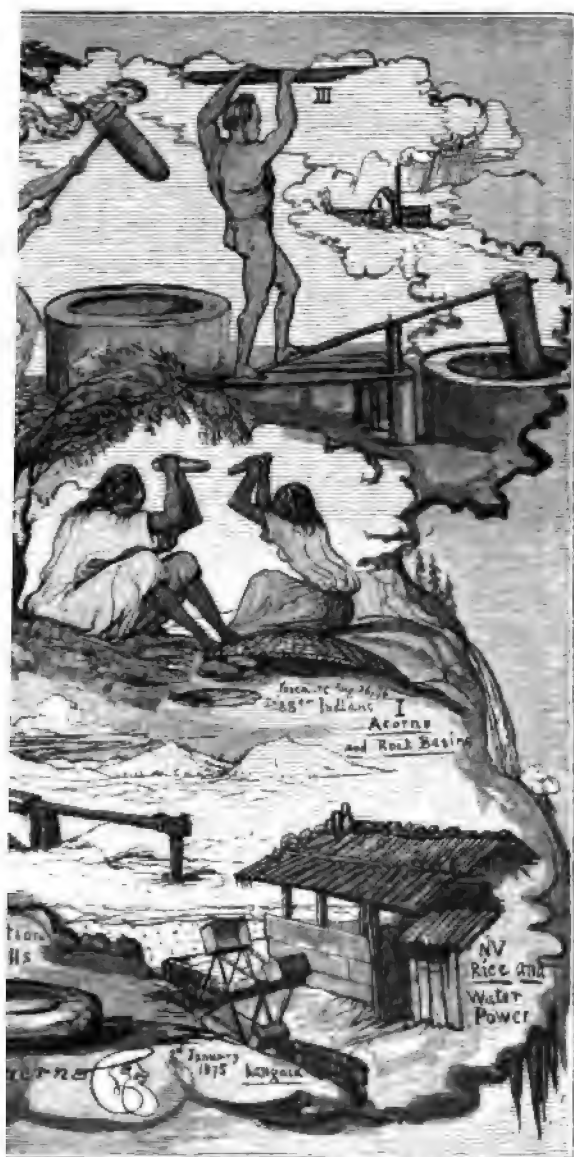
At one village hereabouts we inspected a temple of Hatchiman. A long paved alley, and several gates beautifully carved, led to a carved temple which was a marvellous bit of wood-work. Dragons abounded, and foliage. In wooden cages, one at each side of the inner gate, are two carved images, larger than life, of courtiers in grand attire, with the usual Daimio faces. They have high shaven foreheads, long eyes turning upwards, well-formed noses, mouths expressive of proud, grim disdain of everything and everybody. They seemed the apotheosis of the qualities which became unbearable—Pride, Cruelty, Taxation. I found their names later. Before the revolution a farmer did not dare to ride on his own horse, and was liable to any outrage that a Daimio's retainer, a gentleman and sworded soldier, chose to inflict. The peasant went round and the Samurai went down.

There was a kind of mild Jacquerie. The peasant mounted, and the mountain gentlemen hid their pride in small villages, where many work and starve proudly still. Hatchiman the soldier, like Buddha the sage, fell in public esteem, and so we found the usual weird pine-trees, a few paper prayers fluttering in the snell wind; solitude, and untrodden snow at the Temple doors. Not a creature had been near the place since snow began to fall. We camped at *Mochisuki* after a very amusing walk of twelve miles.

23rd.—*Mochisuki*.—26°.—This was a very grand tea-house. As usual we kicked off our shoes in the street, and then washed our feet in tubs of hot water. Then we passed in on a raised path through the cooking department and shelter for coolies, and through courts, gardens, and passages, to a grand room overlooking a pretty burn adorned with pines and bamboo. We were in a kind of veranda on an upper floor, and the veranda was common to other travellers. Presently one of these, a fine statuesque gentleman with the usual shaven crown and topknot pigtail, walked out through his sliding panel of paper and bamboo, and stood there with the air of a Daimio in the pose of a Greek statue, as naked as he was born. He had just bathed in the bath-room beside the garden. The glass marked 26°, and, as it read too high, the air must have been somewhere about 24°. After surveying the landscape for a few minutes the gentleman returned to his own bandbox, and presently he was dining there with his family while we dined on the other side of a narrow paper passage. How my fingers were nipped by the frost that night while holding the bull's-eye lantern for my astronomical chum I will not pause to say. I slept like a

dormouse in my Archangel pesk. The morning was bright and sunny, 26°; rising barometer, 28,000. We walked twelve miles to Ouidada between 9.10 and 3.15 p.m. First we mounted 750 feet in five-and-a-half miles to a Tchaya (tea-house), where a man keeps a book for autographs. All the European names that I could find were under half-a-dozen, and most of them belonged to the British embassy. I made him a picture of a Highlander. 27-250. Then we walked down to a river where we had "tiffin" in a Tchaya and bought a mandarin duck for the larder. Then we walked up a narrow gorge, one of several branches, all of the same V pattern, all scamed and scored by torrents, each with a narrow river-plain at the bottom made of rolled stones. Bamboos like larch-trees, pines, paper mulberries, rice in patches, mills without end, villages with heavy stones on the roofs like chalets, icicles, sunshine, and snow; these were the features of the day's march. Distant views of Asamayama right behind us gave a good excuse for an occasional halt.

MILLS.—It has struck me several times that within the last few months I have seen the whole progress of the invention of a mill. This day I saw a new step, or one that was new to me. Stone implements, found everywhere, prove that the greater part of the world has been peopled by men who used stone tools. It seems to me that there are certain mechanical principles which any creature with intelligence may discover and apply. Many a time have I seen a hooded crow using gravitation to get food. The bird, having found a large mussel closed, too strong for his beak to open, lifts the shell and flies or into the air and drops the mussel repeatedly at a point where it breaks. Then he tumbles up the



MILLS—POUNDING AND GRINDING.



shell-fish. A woodpecker hammers at a tree and uses his neck as the handle of his hammer. Some philosophers hold that the lower animals are automata and machines constructed by their maker to work within certain bounds. Others hold that these machines have drivers of moderate intelligence. The Buddhists hold that they may become Buddhas. If proverbs be the wisdom of nations, popular tales contain a great deal of sagacity, and these attribute some kind of wisdom to hoodie crows. For example, an old crow once instructed a young one, and said, "If you see a man going along the road with a bent thing with a flat end under his arm, fly away as fast as you can; that is a bad man with a gun, and he may shoot you."

"Yaw caw," said the young crow.

"If you see a man with nothing under his arm, and he stoops, fly; he is picking up a pebble to throw at you."

"Caw," said the pupil.

"If you see a man going straight before him, looking neither to the right nor to the left, you need not mind him," said the mother.

"But if the man has a pebble in his pocket?" said the young crow.

"You may go," said the mother; "I need not teach you any more."

The story is founded on the habits of real crows. They seem to know their enemies and read their intentions, young and old. I have seen them defy a keeper and keep well out of shot. I have seen them sitting on a mound within ten yards of me, bowing, blowing out their throats, and setting up their crests, and seeming to know so much that men have

made them soothsayers all over the world. Manifestly the crows learn one use of gravitation where they have need of knowing how to break big mussels on a sea-coast. Some of the family learn to talk better than any parrot, but they do not seem to understand what they say in human speech.

No one, so far as I know, has yet asserted that he is himself a mere machine. Bodies are engines, but there is an engineer in every human body, able to learn mechanics. The Digger Indians about the Sierra Nevada are commonly placed very low in the scale of humanity. In the Yosemite Valley, in August, I saw an Indian woman breaking roasted acorns with a pebble. I have seen a monkey do as much in the Zoological Gardens. Crow, woodpecker, monkey, and woman, had enough of intelligence to use the mechanical principle of a hammer—a weight and a handle. But the savage has more intelligence; his engineer is capable of greater works of art. I saw these Digger Indian women making acorn-meal with a pestle and mortar. Holding a long stone with round ends in both hands, using the arms for handle and the shoulder for pivot, they hammered away till they made pits in a granite block, and therein they were pounding and grinding. I have seen a French cook of superior skill performing the same act in preparing a dinner for epicures; and I have seen a very small Highland boy pounding shells in a rock-cup to make bait for fish. I have seen a doctor's apprentice at like work. Later I saw half-naked women in Java beating rice with a long, heavy stick. It seems that all sorts of human creatures are capable of inventing a pestle and mortar. But so far as I know the closest of apes has not yet been seen to do so. I have seen the orang-utan in Japan

human intelligence, left alone, has invented an improved pounding-hammer. All along the road to Nikko, and all along the Nakasendo, in Tokio, and in villages, I have seen the people pounding grain in a large mortar, about three feet wide, with a heavy wooden hammer. It is the Digger's pebble, with a haft long enough to give a longer stroke, heavy enough to give a heavy blow. The workman heaves up the pestle by the handle, and lets it drop. They had got the length of stroke doubled. That step is beyond the power of any lower engineer. No monkey of my acquaintance ever put a haft to his hammer. The Diggers may in time ; meantime they have not got beyond the long pebble held in both hands at arm's length.

The Japs being intelligent went on engineering. I saw a few days before a beautifully-made brown-skinned lad, straight limbed as a bronze Apollino, holding by a cross bar, and raising a very heavy wooden tilt-hammer, set on a much longer handle, by using his own weight at the end of a lever with a fulcrum. He stepped up on the end and stepped off his treadmill, and the pestle fell into a larger hole with more grain in it. I afterwards saw the same engine in full work at many other places ; the men working with the regularity of clocks, and displaying extraordinary muscles specially enlarged by practice.

This day I saw another step, and a great stride, in the mill invention, and next day I sketched the contrivance. It looked strange out in the deep snow covered with icicles, rising and falling there all alone eight times in a minute. It was precisely the same engine as the last-named tilt-hammer, but instead of muscular force to lift a human weight, the

Japanese engineer had applied water power. The rays of the sun raised his weights, and the earth's gravitation worked the pounding machine. A small stream, led through a bamboo, fell into a wooden vessel, shaped like a boat's scoop, made fast to the end of a pole. When the scoop filled, the water weight, at the short end of a lever, lifted a hammer, curiously constructed of wood and bamboos and pegs and stones. The water ran out of the scoop, and the tilt-hammer fell into a large hollow full of rice and straw. It was a Japanese threshing mill. Not far off, under a shed, another tilt-hammer of the same species was crushing buckwheat. I saw no more of these engines in other districts of Japan. I never saw the contrivance anywhere else, so I assume that this is a native discovery in engineering.

They did not stop when they had harnessed the sun.

Some days later I found time to sketch that which I take to be the natural growth of this water-hammer into a mill which is neither over-shot nor under-shot. The first samples I saw had two square boxes, opposite to each other, at the end of long spokes, stuck into an axle, so as to turn it on the pivot. The water ran into the box when both arms were horizontal. There was considerable resistance, but when the weight was sufficient the whole engine made a half turn, suddenly, so as to lift and let fall a heavy stamp inside the house. This was the Japanese form of a stamp-mill, and, as I never saw the contrivance anywhere else, I suppose it is the Turanian form of that invention. The sample which I drew was another step in advance; it had four buckets, and made quarter turns. The best stamp mill machinery is a better made mill wheels which bear a row of

stamps going, by turning continuously without jerks. I saw them crushing quartz in Nevada, and in California, close to the Diggers, who had only made the first step in the invention of a stamp-mill.

But I had seen more growing mechanics. All people who use a pestle and mortar grind as well as pound. Boring mollusks use that mechanical action to grind holes in stone, and men and boys do it naturally. At some stage in civilization every savage tribe seems to contrive a quern. To that stage the Diggers had not arrived in August, 1874, though they had learned to speak English, Spanish, and other tongues in the much frequented valley of the Yosemite. Our Celtic ancestors had hit upon the plan of making the pestle turn in the mortar, which is the principle of a quern.

So had most of the people who used stone implements all over the old world. The Japanese had got to the hand quern, and being conservative radicals they use the hand quern which I have seen used in Minglay, near Barra Head. But they have gone a step further. They work the very same mechanical contrivance which I have seen at work in Iceland. A large stone is turned in a large stone cup, with a longer handle, of which one end is in a pivot in a beam overhead. One woman turns small mills of this kind. I have seen larger ones whirled rapidly by three or four Japanese, who swing the stick from hand to hand and do right good work with the improved hand quern. A horizontal mill-wheel is the next step. I have seen one applied directly to turn a quern in the Faroe Isles and in Scotland. Stones used as pivots are found in Tiree. I never fell in with that contrivance in Japan. The Turanians seem to have arrived at

their own jerking vertical water-wheel, with spokes on the axle to work tilt-hammers ; while their opposite Aryan neighbours got to a horizontal wheel on the axle of the quern. Now the whole lot have got to improved machinery, to the last contrived by engineers, and sent to the ends of the earth. But all this time the Diggers have not got beyond the "cnotag," which little boys use for making bait out in the far West. Very few monkeys have learned to crack nuts with a stone. Are men improving in mechanical skill ?

So far as engines for grinding and pounding record progress from the drift period of Europe onwards, mills and querns show a gradual advance in human intelligence. It is hard to believe that men in Europe, Asia, Africa, America, Australia, and Java, all descended from a knowledge of mills, to querns, and to pebbles wherewith to pound. It seems proved that civilized water-mills have grown out of savage querns, and ruder stone-hammers by the successive efforts of the mechanical engineers who drive the engines which are healthy human bodies and brains in good working order. Men have improved in practical mechanics by the philosophy of "Try" and "Can do." Therefore, as the song says—

"Work, boys, work, and be contented."

There is time enough to sleep after work, and the harder we work the sounder the sleep, according to Buddha.

Thursday, 24th.—We halted at *Uada*, a small town in the jaws of a glen. In the morning the instruments read 39°, 27.4 in. . . . The roads were poached by the feet of . . . six-and-

three-quarter miles we mounted 2,100 feet to a mountain Tchaya, where we halted to feed. As we rose the ground dried, and we got to frozen snow and icicles and a cloudy sky with a snell wind. Then we went over about 400 feet more in ten "cho," over a ridge and down to another mountain Tchaya, where we halted after making nine miles over the *Uada Tonge*. The whole of the day's march except the start was over snow, on a narrow track, beaten hard by baggage trains and pedestrians.

After the last Tchaya we got to a strong cutting wind, a considerable snow fall, a thick mist, and fierce cold. The baggage ponies, three in number, could not keep on the beaten snow, but slid off into three or four feet of soft sludge. The men, with great pluck, unloaded them and carried the loads over the pass. They too fell and were lifted, rose and struggled, and helped each other, and got and gave help to others in the same plight. I too fell and slipped and slithered. A man in a cago passed; I stepped into the snow to let his bearers keep on the path, which was a snow ridge three or four feet high. The traveller said "Thank you," in good English; I answered, "Yorashi," all right, and we grinned. Then a herd of loaded bullocks barred my way, and I had to make room; then came a string of patient pack-horses, quietly sinking into the snow and struggling out of it. Then came the fiercest snowdrift that I ever encountered, a storm of ice-needles that pricked my hands and forced me to shut my eyes, and I lost the path and was left in the lurch by my squire, who had trotted off into a cloud. A man overtook me, and we hit upon Koiti, the Japanese cook, who, with great presence of mind, had wrapped himself in my

waterproof. Then we trotted down hill by a zigzag path, and found a lot of our horse-boys, with part of the luggage, in a shed. By that time my beard was heavy with ice, and my clothes crusted with frozen snow. In short, for half an hour I got such a dusting as I never got elsewhere, though I have travelled much in northern regions, and amongst high hills. The height of the pass I made about 6,000 feet above the sea; but it is not possible to measure heights accurately with a pocket aneroid, especially when there were no sea-level observations to check the mountain readings.

My chum, with his interpreter, would not stop at the first Tchaya, where I halted to study the ways of the place and people and drink tea. From the shelter near the top we trotted down at a smart run to a kind of grunting song "Hai-yo-ho, Hai-yo-ho, Hai-yo-ho," till we got to a mountain tea-house, with a fire burning in the porch. There I found my comrade all right. There we dried ourselves, waiting for luggage. As it did not come and rain did, and thicker mist, and evening, we got a fire made in a room, the room made snug by sliding paper walls into place, and there we camped under a stong, and smoked and steamed till dark. When the luggage came we dined, and then slept like the cobbler "who lived in a stall, which served him for kitchen and parlour and all."

In such places and cases national character comes out strong. It was once my fate to be upset in a cariole one dark, rainy night in Norway. The road was crowded with market-people walking and riding, and nobody would lend a hand. When asked to help the answer was, "Jey her se da. I have no time." In Western America I remarked

to a fellow traveller, "It's every one for himself and God for us all, here, I see."

"Do you think I care for any of that superstitious stuff," said the other, who was a central European.

"Well, then, it's devil take the hindmost," I said. And so it was generally in these Christian lands. Here, up in the snows of this terrible Tonge, I found a nation of good Samaritans, all helping each other, and these little Japs rose high in my esteem. Not one cross look could I detect, not one blow fell on the hide of a pack-beast. When a horse floundered they pulled him up by the tail, and he did not kick. As the Scotch proverb has it, "A guid man's guid to his beast."

HOUSES.—Having nothing to do but smoke I thought over Japanese architecture, and Lapp tents, and the monuments of prehistoric men in Britain. These Japs closely resemble Lapps in many ways. Their hair is invariably black and straight; their eyes turn up at the corners, they have scanty beards, or none at all; their stature is small, they are sturdy and strong, and hardy, and tend towards bandy legs. Generally the make of them, and the look of them, reminded me continually of the people who wander about the country between the Lofoten Isles and Archangel. It is not a very great way from Archangel to Saghalién, and I am strongly impressed with the notion that all these northern people are of one stock. So far as I know their characters, Lapps and Japs are alike, in that they are cheery, hearty, good-humoured, excitable little beings, ready to pick up knowledge, and use it; ready to trade, ready to work, and fond of play. Supposing these to be in fact civilized Lapps

and Samoyedes, it is curious to notice how their civilization has grown.

A camp-fire is the foundation of all human dwellings. A fire in a ring of stones and a shelter of branches built over it was the home of the Digger Indians. I have seen a Lapp hang his shirt by the sleeves to a couple of bushes, and sleep under that shelter from troublesome mosquitoes in hot weather. That was a tent.

The Lapp tent for rough work is thus made : Four or five growing birch bushes are selected, their tops are woven together, so as to form a roof, the ground is cleared in the space covered by the trees, and there the bed is made. A cloth or skin thrown outside makes a capital room in a very few minutes. The Tana boatmen commonly made such structures when I was fishing there. I thought of Gothic cathedrals when I looked at the stems, and branches bound at the top. The next step is to contrive and carry a roof and walls big enough to cover a couple of men. A couple of strings tied to a couple of bushes makes the ridge of this portable house; a few wands keep out the walls, and the men sleep with the curtains tucked under them, on a bed of branches. The string ridge *curves*. The ends rise and the middle droops because of laws which govern mechanics. The form occurs in Turanian buildings.

The next step is the family tent. It is a conical structure, built with poles, which are carried about on the backs of deer. The frame is covered with skins, or sailcloth. The door-way is triangular and the door is a bit of cloth shaped like a jib, crossed with staves of wood to keep it stiff. The fire is

ring of stones. The smoke escapes through the wooden frame at the top of the cone, which is left uncovered. From a cross bar hangs a hooked stick with contrivances for raising and lowering it, and the family kettle hangs on the hook over the fire, in the ring of stones. The people sleep with their feet to the fire, in their clothes, and the "Atchi," or father of the family, sleeps "ayont the fire," opposite to the door.

The next step is the "kota." That is a permanent house constructed upon the lines of the family tent. The difference is in the materials. Birch bark is next the frame, in regions where birch-trees grow; skins and cloth coverings are replaced by turf and earth, sometimes by slabs of stone, where slabs are common. Sometimes half of this primitive house is dug out of a bank so as to give more head-room, and keep out the cold more effectually. In this stage the house is round, with upright sides and a conical roof. Such houses abound in Iceland of all sorts and sizes, and they abound in the Hebrides and in North America. In Cape Breton I sketched an Indian conical wigwam made of poles and birch-bark, exactly like cotas which I have sketched in Lapland. They were the very same structures, and the people who lived in them had a family likeness. Beside the Indian wigwam was a house constructed by a Celt, who had crossed the Atlantic with his own notions of architecture. One end of this house was round, and made of turf and rolled stones, on the model of houses which abound in Tiree and in Minglay, and in all the western Scotch isles. But because this Celtic nomad was capable of adaptation, and of learning by experience, the rest of his house was built of cheap sawn

planks. The camp-fire is covered with a conical round tent: that becomes a "kota," and the kota when raised is a round house.

The round house of the ancient Celts grows to be an oblong structure with round ends. The tent becomes a conical roof; the roof rises upon upright walls, the circular plan changes to an oblong with round ends, and these semicircles get squared. Their architecture stopped in the Hebrides and in Iceland. The largest dwellings there, constructed by the people, are only a series of houses joined together so as to make a number of rooms.

Such houses left to themselves speedily disappear. In 1849 I pitched my tent on the Tana, and sketched in a kota which our men used. Last time I was there a ring of stones marked the site of my camp, and all that I could find of the earthen kota was the ring of stones which marked the hearth, and a circular space of grass somewhat greener than the rest. The Japanese house clearly is an improved tent. The ridge poles are so constructed as to imitate the natural curves of the Lapp portable booth. The whole roof is an imitation of the forms of booths. Walls there are none. The roof is lifted on squared posts, and the floor is raised so that the simple structure is like a British four-post bedstead. Instead of curtains the sleeping-place is sheltered by sliding structures, made on the plan of a Lapp tent-door, in that a limp material is stretched by a frame. The Japanese being ingenious, handy, constructive creatures, invented a very superior article in the shape of mulberry-bark paper, and having abundance of intelligence and bamboo, and good workmen, they make beautiful things, in which they waste their time, with exceeding

neatness ; but the Lapp door is the first stage in the invention of a Japanese wall. It is a movable structure, a limp fabric stretched on a frame. The beautiful Japanese mats, which fit into the floor, are stuffed with straw, and clearly are but improved beds of grass. The fire in the hewn stone hearth is but the tent fire, and the fire in the huts and houses of Lapps, Hebrideans, Icelanders, and North American Indians. It is the camp-fire in the stone ring which trappers, lumberers, gold-diggers, tinkers, and travellers, make all over the world. So the Japanese house is an improved tent. Q.E.D.

A great Japanese gentleman once asked me to join him in a duck hunt. Like all such proceedings, from a pheasant battue to a picnic, or a tea in the woods, this was playing at savages. I found my host surrounded by his people in a shanty, with a fire on the floor, and a great iron tea-kettle hanging over it from a hooked stick black with smoke. The kettle was so made as to look as like a bit of rock as possible. But the structure of the bamboo hook in this Tokio hunter's hut which boiled my tea on the 7th of December, 1874, was nearly identical with the structure of the birchen hook from which my potato dinner dangled in the Isle of Minglay, near Barra Head, on the 20th, 21st, and 22nd of September, 1871.

The arts of the cooking animal, as well as the architecture, have grown in the same direction at the extremities of the old world. So far it remains an open question whether human intelligence does or does not hit upon the same mechanical contrivances naturally with or without instruction. Any beaver of ordinary sagacity can build a house and make a dam. I saw their structures in Newfoundland, and heard stories there which seem to prove that within their

own limits beavers can reason. But there is a limit to beavers' architecture, beyond which that tribe have never gone, and never will, I suppose, while they continue to be beavers. The Japanese, left to themselves, and shut out from the rest of the world for ages, advanced to houses standing on stones, with walls of bamboo and paper. Then they got to movable outer walls made of sliding panels or slabs of wood set in frames. There they stopped, for the temples are but larger houses, built on the lines of houses. The only architectural advance that I could discover about temples was to a panel turning on a hinge to make a folding door. The principle of the hinge is of the simplest. It is that of the old Highland gate, in which the end of a pole is stepped in a hole in a stone, and the upper end is held in position by a forked branch built into a wall. In the large towns framed warehouses are made with fireproof clay walls, and clay doors which turn on similar hinges.

The Japanese architects have just begun to build stone edifices. It is therefore interesting to watch how they began. I have somewhere read that some Indian structure is "very good carpentry, but very bad masonry." All the stone-work that I have seen in Japan is pure carpentry—that is to say, it is a very close imitation of Japanese structures in wood. At Shiba and Nikko are rails hewn out of solid granite, as beautifully cut, but they are so exactly like wooden rails that I had to go near them to make sure of the material.

At all Shinto temples, and at many of other denominations, is the practice to set up a perch for sacred birds, which is called "Torii." It consists of three sticks or beams or logs. Two are vertical, and the others horizontal.

curves like a stretched rope, with a fourth straight below to keep the structure firm. It is a gallows, etc. At many of the larger temples these gates are made in stone, so well that I have repeatedly been puzzled as to the material. Some of these are covered with bronze, but the shape of the wooden perch is preserved. About half of the more important temples are stone bridges of granite, excellent masonry in all that has to do with work, but pure carpentry as to form. The bridge in the w-pattern plates may serve to explain what I mean. The gate bridge at Nikko is first-rate carpentry; but it is the same as Norwegian structures of the same kind. It is made of logs. Without a drawing I cannot describe it. It may be that some Norse sailor taught this art to the Japanese. No foreign mason ever could have taught them to make stone tombs of the Daimios which are at the back of the gates. The doors of these curious structures, of which I found no mention in any book, are two great slabs of granite, carved into the semblance of panelled wooden doors, resting on granite hinges, made after the pattern of a Celtic

I believe that the very same structures still exist in ruined cities of Bashan. The gates open into a court, beyond that is a stone house for the dead, adorned with these heraldry. So far as I can discover, the Japanese copied this stone idea for themselves within the last few centuries. The only other stone structures that I saw were tombs. They suggested cups and saucers, posts, and wood logs.

I saw no masonry in Japan but Cyclopean walls. They are great drystone dykes, like those which men build in

Scotland to fence fields; or like those great city walls in ancient Greece, at Mycene and elsewhere, which go back to unknown antiquity. But these Japanese fortifications only date from the time of the Shoguns. It appears that Japanese masonry has been developed out of Japanese carpentry, by the ingenuity of Japanese men shut out from all the world and left to their own Turanian devices. I therefore lean towards the opinion that any savage may, without instruction, discover certain mechanical laws, and apply them usefully; and that many generations may increase the common stock of inherited knowledge, learn from elders, and by experience improve. The pounding-stone of the Digger Indian in America and of the fisher-boy in Scotland might be invented by any human being with intelligence equal to that of an ape; and may develop into a mill, and thence into a steam-engine, or something better. The shelter of bushes tied together at top might be invented anywhere by any man with the intelligence of a tailor-bird or a spider. But the Gothic cathedral, which seems to have grown out of that primeval bower, took a long time to develop in Western Europe. The change from a booth to a temple is manifest in Japan; what more they might have evolved out of their ingenuity can never now be known, for the stranger is here with his ideas of the fitness of things, and his rules of beauty and his fetters of art; and the school-boys or abroad has settled in Japan.

The Japanese house is but an improved tent, and the temple is but a bigger house: all the stonework that I see is pure carpentry, but this will appear when next I get a chance. Now the cold of sunset is cramping my finger.

through a thin sheet of paper, and the glass marks 30° at 5 p.m." That was the keynote. This is the result of feeling what Japanese architecture is near the top of the Uda Gorge, out in the cold.

It plainly appears that Japanese humanity is capable of instruction as well as of self-culture. Some time ago the government acquired a steamboat, and, like children with a new toy, the people determined to work it. The engineers thought that they knew all about it, and off they went. But when it came to stopping, the learners broke down. The prince had got on the flying horse, and the horse had flown away with him. The engineer could not stop the steamboat. But these are a people full of intelligence. "They may dee for want o' meat, but they'll no dee for want o' wiles." They knew how to steer boats well enough, so they made their boat go round and round where the water was deep. They knew well enough that the power was in the fire, so they drew the fires, and waltzed till the engine stopped of its own accord. They are ready for any emergency, and quite ready to "try" anything; so they 'can do' a great deal. Japanese engineers are running Japanese steamboats and railway engines all over the place. Japanese embroiderers are running sewing-machines. In a very short time they may begin to build stone houses; meantime they prefer band-boxes, and if they be content therein, so was I with a pleasant comrade and something to think about and to argue out in alternate English and French.

Friday, 25.—Christmas Day.—39°; Barometer, 25·600, fallen a tenth only.—Rain, mist, and rapid thaw. The bill for two

masters, three servants, three coolies, and a horse, was six shillings and sixpence. The old woman was caught presenting two boos to our men as a Christmas box, or a squeeze. Consequently the bill was four and sixpence. I believe it ought to have been about half that modest sum. We walked and slipped down frozen snow, glazed with water, to 26750 (1,150 feet) in six and three-quarter miles, to *Shimonosha*. So far as I can make out, we had crossed a "Tonge," which divides the waters which flow to the Pacific, east of Fuji San, from those which flow to that ocean west of the great mountain. My next march was to be over the back-bone of Japan, to waters which flow into the Yellow Sea. My comrade was to go to the Pacific, and observe in a valley where few foreigners had been. He too was "everywhere to look about," but here we were to look different ways. We passed a sportsman going out a shooting with his dog and his gun. It was quaint to see a man in blue cotton striding along in the snow on clogs, with his bald head and pigtail protected by a cotton handkerchief tied under his chin. It was quaint, but not absurd; for these men walk very well on their clogs, and stand rough weather in cotton clothes, like true mountaineers. On the way down, I noticed many large stones, which set me looking for ice marks. The watercourse near the halt is dug through an old boulder deposit, which may be a delta, and might be a moraine. The rocks are metamorphic; gneiss, conglomerate, and green slates, with basalt. The strike S.E. strike S.W. We seemed to have got off the volcanic action, which is about the region. We had got to a lake, and were looking for





cial marks. I found none, and ascribed the transport of these large smooth granite blocks to local floods.

At the entrance to the town, which is considerable, and beautifully situated, is a fountain. The water flows into a stone half-basin, from the mouth of a stone dragon's head with stag's horns and curious ears. The whole was exceedingly well carved, and so managed as to suggest that the monster was creeping out of a tuft of growing bamboo, beside a great flight of stone steps, which led up to a series of shrines and to a big temple. It rained so that I could not stay then. About the middle of the town is a hot spring. The water is gathered into a large square bath, open to the air. In it was a naked man, with a broad straw hat on, to keep off the sleet and rain. Every now and then he got out to cool, and squatted on the brink, panting; manifestly he could hardly endure the boiling. A dozen damsels were washing clothes in this same pool. "These persons everywhere look about." I tried the water, and feared to break the glass at 115°. I could hardly bear my finger in the bath. We walked on through the town to a grand Shinto temple. The Torri, or bird-perch gate, is covered with thick bronze plates, inscribed with the names of all who helped raise this monument. It is a grand work. It represents stone logs, and is stone, covered with bronze. Metallurgy and masonry copied carpentry. A great flight of stone stairs leads up to a plateau, on which grow tall old trees. Amongst them, in a paved court, is a stage for sacred "NO" dancing festivals. Beyond that is the Shinto temple of unpainted wood, beautifully carved, adorned here and there with gilt bronze fastenings of the usual kind. That is a bit of Buddhism.

Under a shed are several pictures on wood ; one of two stags had real horns stuck on the board. The other I knew at once for the Japanese version of the "Dragon myth." I was wet through, and the tea-house next to this temple did not look flourishing ; my squire and comrade returned to the town prospecting, and I drank tea. Presently one came to summon me, and we got housed. It was raining cats and dogs with a strong inclination to freeze and snow. We were to part, so we agreed to rest for a few days. Opposite to our door, in the middle of the town and in the main street, is a structure like the market-house or weighing-house of an English country town. An open shed, upon big posts, roofs a steaming pool, fed by another hot spring. The pool was full of men, women and children, boys and girls, walking about and chattering. Two creatures as naked as Adam and Eve walked quietly up the street on pattens, under a paper umbrella, towards their homes, which were at the other end of the street as it seemed. Supposing this to be the innocent costume of the country, and this Eden, the weather was certainly very cold.

"What do you think of that, monsieur ?"

"That to me is well equal," said my philosophic comrade. So we got boiling tubs into our garden, and followed the fashions, and dressed for dinner.

THE DRAGON MYTH.—This is the story of the picture as told to me by Massanao, my squire at Shimonoshua. A man with long black hair and a hooked nose, and a long straight sword, loose red trousers, a flowered white cloak, and curled-up shoes, like those of the Mikado and Laplanders. Eight roses, breaking waves and the wind tree.



ANCIENT PICTURE OF DRAGON MYTH AT SHIMONOSHUA, JAPAN.



and a storm of wind and rain driving at the man ; eight heads, like the head of the dragon of the fountain. A woman crouched in a cago, behind the warrior, dressed in Japanese draperies ; a great deal of unpainted wood to make the background of this curious old sketch by a very clever hand ; a lot of Japanese writing, and a black frame which had remnants of gilding. That was the picture. The whole was much weathered and battered and in a bad light. It is at least three hundred years old. This was the Legend : A man, the hero of the story, came to a house where all were weeping. He asked the cause. An old man said that he had had eight daughters. A terrible dragon had eaten seven in succession, in seven years ; all but one. The eighth was now to go to the sea-shore to be eaten. The hero's name was Sosano no Nikkoto, and he was the brother of Ohiru me no Nikkoto, who was the mother of the first Mikado ; his name was Jimmutenno. The girl was called Inadahime ; her father was Tenadiu ; her mother Ashinad. My squire was very particular, and took pains to get all these personages properly identified. I spelt by ear. The man (Sosano) said that he would fight the Dragon. The father (Tenadiu) was afraid. The man got eight pots full of *sake*, and set them by the shore, and the girl behind them. He hid himself behind a rock. The Dragon came out of the sea, and put a head into each *sake* pot and drank till he was drunk. When he was drunk the man came and cut off all the eight heads. Then he chopped up the dragon ; five inches (here my squire measured with his thumbs) was the biggest slice left when he had done. When he cut the tail (observe, he had but one tail) he found a long sword which is called Amuno-mura-ku-mo-no keng

(sky-black-cloud sword). "Plenty black cloud when Dragon come out; when killed go away. Therefore name." The thirteenth Mikado's son, Kekotenno Yamato du ke no Nikkoto, took the sword to war, and made burn the grass with the sword; from that time called Sananinoken (grass-mowing sword). That sword every Mikado keeps; also a looking-glass; also a jewel—a curious stone, top red, bottom white, like a pear. The stone belonged to the mother of the first Mikado (Emperor), namely, Oshiru, sister of the hero Sosano. The man who killed the Dragon (Sosano) married the girl (Inadahime), and they became the "gods" of all married people. They are called Emmusubino kami. Their temple is in Oyashiro, in Idzumo province, in the north-west of Japan—north-west from this place. The first Emperor began to reign 2,534 years ago. He did not kill the Dragon; he killed men and women.

That is the legend as I got it from a very smart lad, and everybody seemed to know all about it.

St. George killed his dragon later. His exploit is recorded on English coins, but I had no idea that the state legend of Japan is, in England and Russia, fathered upon a Christian knight, till I found him pictured at Shimonoshua on Christmas day 1874.

The Dragon myth was one of my points, and here I scored

If any reader will look to a school globe, and measure with a string from Barra Head in Scotland to Galle in Ceylon, and to the extreme east of Japan something like an isosceles triangle will be included, and a rich join

these points. About midway is the Central Asian "Aryan" and "Turanian" country about lake "Lob," Tartary, Turkestan, Tibet, &c. In gathering the popular tales of the West Highlands I had fallen upon so many versions of this Dragon story, that I took some seventeen of them and translated them, incident by incident, till I had got all my incidents into one story. The next step was to read all the versions of this legend in all the languages that I knew, and in all the translations available. Any new incident was added in notes to the mended Gaelic tale of the Dragon. From popular tales I went to national epics and classics, and so back to the *Vedas*. Mr. Fergusson's book on *Tree and Serpent Worship* carried me to the first chapter of Genesis. Before I ventured to print anything on such a large subject, I thought it wise to take a look at the other two corners of "Eurasia," if I may use that newly-coined Eastern word for the world outside of Africa, America, and the South Sea Isles. I had now got two points; the next point was Ceylon; the next side of my triangle the coast of Asia. I wanted to find out if I could what this Dragon myth means.

1st. Here was the dragon with red eyes, in a rain-cloud, and coming out of the sea once more a fiery water-dragon.

2nd. I had found in his tail the "White sword of light," of the Gaelic tales, manifestly intended to be lightning in Japan.

3rd. With this property of the giants and enchanter's of the West Highlands I had found the jewel "leug;" the talisman which takes so many forms. And

4th. The looking-glass which the lad always wins from the many-headed people whom he overcomes, in my Dragon

myths. That property specially belongs to Benten, the Japanese snake-woman of the sea. *Is she the sun?*

5th. Here was an intoxicating drink in the power of the human being who conquers the dragon. It was *sake* here. In Norway it is ale; in the story of St. George it is resins steeped in wine. Some fermented drink belongs to the Dragon story, and many Vedic hymns are addressed to "Soma" juice.

6th. The Japanese foe is adored as a divinity with seven heads. Here he had eight heads and one tail.

The next thing was to see how he was represented at the remaining corner of Eurasia; I have got him booked in the far east and in the far west.

When I got to Ceylon I found the Dragon a friend of man. His figure is sculptured about Buddhist temples of great age; his image I found upon an altar on which were offerings to the sacred Bo tree, which is worshipped at Anuradhapura by crowds of pilgrims. He has one tail and many heads. It would take a small volume to tell all that I had learned about this Dragon myth, and to give evidence on which to found a theory. Sometime or other that may be done, meantime this must suffice. If Japanese, this myth cannot mean a Solar hero, the sun conquering the clouds; for the Japanese solar divinity is a woman.

The round mirror of Japanese regalia and altar furniture is said to represent purity. In Shinto temples it stands in the centre of the altar and is the sole ornament. There are no artificial lights, and no flowers there. I believe it to represent the sun. The sun is the heraldic device of Japan, the *crystalline orb* is her favourite emblem. The Mikado's crest, and

a fit image of the sun. The cock, the herald of morning, is another heraldic device, which belongs to high families, and is everywhere carved and painted. Taking all that together, Solar worship is strongly indicated. The rain-cloud, the storm, the sea, and the straight flashing grass-burning sword of the Japanese regalia, all indicate a meteorological origin for the Japanese version of the myth. The heaven-born Mikado ought to be a solar hero; and the water-dragon the storm-cloud. That is the explanation given long ago to the Indian myth of Indra and Ahi. That myth, extracted from the *Vedas*, and other Sanscrit records, existed in Central Asia about the district from which great rivers part, near the "Aryan" country. In all natural history, and in all geological records, there never has lived on earth a creature with eight or with sixteen heads. I have shown by the growth of mills and houses that inventions are gradual, and that new ideas spring from the union of older inventions. It would be contrary to experience to suppose that a being of many heads sprang ready made from the mind of an ancient seer, whose creation has multiplied till the world of story is peopled with dragons of many heads. Something real is wanted for a model on which to found this unearthly shape. That something appears in a river. The myth appeared early about the Eurasian water parting. A "*Serpentine*" stream flows into the sea; at the mountains the streams "*branch*." The "*head*" waters are many. They all came from the clouds. It seems reasonable to ascribe the form of the water-dragon to the form of the Serpentine river with many heads.

To those who dwelt on the banks of the sacred "*Serpentine*," the emblematic serpent of many heads would be a

friend. With him would be associated, naturally, the fertility of the soil, and the great shady branching trees which sheltered men from the rays of the fierce sun. There is nothing terrible about a great plain river like the Ganges, or the Yangtse-kiang. But there is something terrible in the leap of the water-dragon to earth from the sky in the mountain storm; or in the rush of a typhoon out of the sea into which all the rivers run. If the water-dragon was derived from a branching serpentine river, it is natural to find his home in a black thunder-cloud, or in a great ocean. All the mythical dragons that I know are water-dragons, even though they may spit fire. This new Japanese acquaintance is of the same breed, and close to a lot of hot springs, pouring water out of his mouth for the good of mankind. The idea of sacrificing damsels to the water-dragon may easily be traced to facts.

The serpent worship of the ancients is scarcely hidden in Japan under Shinto myths. In Ceylon and in India serpent worship and the worship of trees goes on. Buddha preached, and Buddha's disciples still worship a slip of the sacred Indian Peepul-tree under which Buddha died. About it and about ancient shrines in Ceylon they carved the sacred cobra of seven heads, and the Naga men and women, who retain their serpent hoods to show what they were—the underground *snake* people of Singhalese mythology. For the sake of their old objects of worship, the deadly cobras are rarely killed by natives in Ceylon. They sheltered Buddha from rain.

The mythological sequence takes this form:—1. A worship of the powers of nature, in which the sun and the cloud

are worshipped.

2. A worship in which ancestors and ancient worthies

were promoted to conquer the powers of nature, or to preside over human affairs. "Hatchiman" was so promoted, and so were Sosano and Inadahime.

3. The worship of birds and beasts, emblematic of certain qualities, or the devices of families. The fox is worshipped in Japan. Perhaps because he digs holes, he and his Kami are the patrons of agriculture. In any case, in human form, or as a fox, there he sits in temples, an object of worship to many votaries, who offer him rice in cups and prayers on paper. I have seen a neat little rockery in a Tokio tea-house, with a toy fox's earth contrived in it, and small *sake* cups full of rice there, offered by the tea-maidens to their domestic kami, Inari Sama, who is "Reynard the Fox." The *adger* is another mysterious personage, and now is a foe readed of men. His habit is to take human shape, and beguile men. In his own shape he sits up and plays the drum on his paunch, to the terror of Japanese mankind.

4. Buddhism came in, and, as is the way of Buddhism, the new faith adopted the old, by converting all that went before. The Nagas of Ceylon guard the doors of Buddhist shrines. Two of them hold the sacred slip, cut from the sacred tree, which became doubly sacred when Buddha had died under it. But that Peepul was sacred in India long before Buddha. Trees are sacred in Japan, and in the Hebrides where Buddha is unknown. All these ancient objects of reverence continued to be revered by the disciples of Buddha, for their teacher had taught that the lives of men migrated into the bodies of all beings that had life in the universe. The whole Pantheon of the whole world was embraced by this philosophy. By this only can I see

meaning in the mixture of Shinto and Buddhism, which is apparent in that worship of Japan which was reformed at the revolution a few years ago. I find sun and clouds, seasons and trees, snakes and dragons, birds and beasts, men and women, Buddha and his disciples, all associated in daily worship, and a round mirror on an altar as the emblem of the reformed Shinto faith of revolutionized Japan.

The efforts of early Missionaries to introduce Christianity, their persecutions and sufferings, and martyrdom, are matters of history, on which I will not enter. It was an open question after the revolution what religion the State should adopt, if any; or what form of government, or whether the language should be changed, or the form of writing, or the court dress. There had been a complete solution of continuity. The whole body corporate of Japan had been reduced to its elements; and the question was what sort of body the life that was loose should next assume. The point about which this Japanese protoplasm nucleated was the Emperor, so the body corporate is the Empire. It may be a Republic or anything else if it breaks up again. The Emperor was associated in the popular mind with "Shinto." The dethroned Shoguns and their following of Daimios and retainers were associated with Buddhism, magnificence, dress and decorations, incense and music, and ceremonial. With the Emperor, Shinto revived; with the Shogun, Buddhism. The men who made the revolution were filled with European notions, but few of them were Christians. It was a question whether Christianity should not be adopted. It was not adopted. Christianity and all other forms of belief were rejected. The Japanese are Christians, and

many Missionaries are doing all they can to convert the heathen. Should the old rulers get up again, many fear that Christian persecution may revive. Meantime Buddhist priests and Christian congregations worship under the same roof, in the same temple, at the same hour, in Tokio. All is change, toleration, and simplicity, in Shinto temples and in court-dress. The body politic of Japan is growing into shape. The circulation is growing along roads and rails, and telegraphs are the nerves; the infant mind is growing under the culture of schoolmasters and Westerns, who may be Kami hereafter if this big Eastern baby grows up in his present Shinto faith.

EXTENDED NOTES (continued).

Saturday, Dec. 26th.—Shimonoshua, near Lake Suwa—lat. 36° 22' 40 N. ; long. 138° 32' 00' E. Barometer, 27·050, 42° inside, 39° outside.—Fresh snow in the street. Below Uada Tonge, say 2,000 feet, above, Tokio, 4,000. In these eight days walked eighty-three miles and a half by pedometer, on bad roads, in deep snow, in cold weather, and on one day in heavy rain. My geological result thus far is that the strike of the older rocks corresponds to the long axis of the island, N.E., S.W., or thereby. The general dip on the Pacific side of the hills seemed to be N.W. Asamayama is placed on the marine chart of 1870, 36° 22' 40" N. lat. ; 138° 6' 00" E. long. Exchanged knowledge with my comrade, and spent a pleasant morning in quiet.

Walked to the temple with the great bronze Torri, where I copied the ancient picture of the Dragon myth. The artist clearly meant to express a storm-cloud, with the dragon's

heads in it, coming over the sea, with red gleaming fiery eyes shining out of the darkness. This makes the dragon agree with "Ahi" of the *Vedas*, as explained by comparative mythologists. A very favourite subject for Japanese artists has been a dragon, and he is almost always painted as a cloud. With the marvellous free touch of a sketchy Japanese brush, a trailing cloud, winding about Fujisan, or Asamayama, or some conical mountain, is twisted into the shape of a dragon with or without wings or legs, with a long tail, and a horned head, or many heads. The glaring fiery eyes are so cleverly indicated, that the imagination is set to finish the mystery, and make the picture a dragon, or a cloud, or both. When it comes to sculpture in wood or in stone, the artist cannot sketch, and must finish; the cloudy monster is solidified, but he is generally set to pour water into a fountain, or he is up in the top of a composition amidst conventional rolling cloud-forms, or he is amongst conventional waves, or near a waterfall or a running stream.

The association of ideas cannot be mistaken in Japan. The cloud and dragon, the rain, the wind, the lightning, the storm, the water, the river, the sea, all are there. The Gaelic word for "a monster" is *Beithir*. A bear, or a wild boar, is so named in stories. The dragon of many heads which comes out of the sea in western myths is also called *Beithir*; a flash of lightning is called *Beithir theinne*—a dragon of fire. Manifestly the dragons of the far east and the far west are descended from the same idea which grew into the Vedic dragon of the old Aryan land in Central Asia. Ahi was a storm.

After he has traced a fact. The hero of this painted
The ancient court

es of the Mikado were the same shape. But that is the
pe of "comagas," which are the boots of Lapps and Finns,
l of the "mocassins" of the North American Indians,
ich have the same shape. They are all shoes shaped like
oat, or a plough, with sharp toes, to wade through snow.
e shoes of the Japanese St. George point at snowy regions,
ere are the sources of great rivers, about which the myth
Ahi and Indra took shape, a very long time ago.

But philologers tell us that a whole tribe of languages
led "Aryan," of which Sanscrit is the oldest known, had a
nmon ancestor in the same lofty region.

Ethnology, such as I know, tells me that certain black-
red northern tribes whom I have seen in Scotland and in
: north of Europe, in North America, and in Japan, are
e each other, as members of a family are like. The non-
yan languages of India have many words which seem to
ve relations in Celtic languages, which are Aryan. I find
Japan that the structure of the language corresponds to
e structure of the Finnish and Lapp. Great rivers now are,
d have been, guides and roads from all time. If I take the
ap, and follow a river, a legend, a word, or a myth, or a
oe, or the likeness of a man, or the colour of his hair, up
reams; all back tracks, Aryan and Turanian, lead back to
entral Asia. But there a number of myths place the origin
mankind on the highest habitable ground in the old world.
that ground the long-tailed fiery dragon of romance has
ed to carry me many a time, but hitherto he has failed.
e is not up to my weight. But lighter and younger men
ve gone there, and on their books of travel I leap to con-
usions from my own stepping-stones. "Excelsior."

My studio was a queer scene. The ground was covered with snow, and it was very cold. A lot of polite children followed me. It was the correct thing to pull off boots before stepping on the platform, and without so doing it was impossible to see the details of the picture. My squire was sent to the priests' house. The priests came with a fire in a brazen shibashi, and as a special favour, in consideration of the weather, foreign boots were allowed to tread the sacred boards. The children looked on, and the priests; and when fingers got too cold for more work, and noses had all turned blue, the priests got a small donation, and a great many bows and thanks, and that party broke up.

With the landlord and my boy, walked to a beautiful graveyard, neat and orderly, on a knoll overlooking the lake. The water was smooth as a mirror, and dotted with fishing-boats. Snow lay on hill and plain, and the landscape was beautiful, but very blue and cold. The graves were marked by tall stones, and stone lanterns, and stone Buddha's, disciples, and kami presided over the family grave-yards. Mine host seemed proud of his place in this city of the dead, and pointed out the graves of his ancestors. They all seem to look on their dead as friends living elsewhere. Buddhists, Shinto, and Christians have that much in common. They differ as to their future world, but so far as I can make out no heathen has yet condemned his ancestors to be the bond-slaves of quacks.

With my very pleasant, polite following of children and gown men, I walked back through the town to the dragon mountain. It belongs to a temple 600 years old, and manifested the heads in the picture, which is but 300 years old. The skeleton of the mountain half the town

ed on ; all civil, polite, and interested in my work, which were pleased greatly to approve—"yorashi!" When the snow fell on the fountain, I mounted 100 feet by stone steps to the temple, which has magnificent unpainted wood carvings about gates and elsewhere. Dragons abounded, and were said therefore to belong to Shinto and the seasons. Fine cherry-trees and cryptomeria make avenues ; and the garden is beautiful. I promised the hospitable priests to return, and I went out and looked at the sunset, and the lake, and the surrounding hills, while children in crowds looked at me. Then I returned back through the town, where half the population were stark naked, in hot water, or out of it in the street. At past eleven I heard the bathers chattering, singing, and laughing merry, clothed in hot water, naked as fish. 147°, 113°, are the temperatures taken by my comrade while I was swimming. My landlord brought me a sheet of superfine Japanese paper four feet long, which we stretched on a slide. To please the worthy man, I covered his paper with all manner of devices, in recollection of the pass in the snow. My landlord being much gratified, further asked for my

It is the fashion of tea-house keepers to hang up the names of their guests outside of their houses, to attract customers. The cards are planks about three feet long, hung by cords, with a name written from top to bottom. A favourite tea-house has clusters of such boards hung about it. Some are lacquered and coloured ; the whole foliage looks very fresh when the wind blows, and the boards swing. As there are persons of great importance, and very rare exotics, large sized boards were procured, and our respective squires were set to write our names on them in Chinese characters.

So far as I can make out, one of the royal family with the title of H. M. Horseford, a "Kunji" of England, and one of equal rank from France, had their cards hung up opposite to the hot spring, for the information of bathers who leave their clothes and clogs in the tea-house porch.

Sunday, December 27, 1874.—Shimonoshua.—Raining and disagreeable. Spent the morning in touching up the land-lord's picture. It is to be solemnly mounted on a roll, like other Japanese signed pictures, and is to be unrolled and exhibited in "the place for hanging pictures" when the proper time and fit season come round for that ceremony. Carry went out to look for game. He found none, but saw the spoor of a small bear in the snow. He found the neighbourhood of the lake thickly peopled and highly cultivated: game creatures are higher up in the hills. The hide and paws of a brown bear hang in a shop next door. I walked to the old temple, and by the help of my squire, had a long chat with the priests. They were intelligent, educated men, with the bearing of gentlemen. We sat round a fire-box, smoking and drinking tea, and dealing for curios brought from the town and from the private stores of the priests. Great drums, and war shells, and strange gear of many kinds adorned the temple. The altar was set out with rows of votive offerings, placed on a kind of pyramid of shelves. They were thank-offerings, and offerings in hope of a favourable answer to prayers. The garden was a strange artificial grouping of stones, lanterns, fish-ponds, trained trees, and porcelain flower-pots all planted on the hill-side in front of the temple. It was a beautiful place but the dark

We bowed and grinned, and performed all the polite gestures that we knew, and then trotted down stairs to the road, and then down more stairs to a pure Shinto reformed and restored temple near the brawling burn, which had guided us from the Uada Tonge to the lake. The carvings about this temple were as fine as any that I have seen in Japan, finer than any that I have seen elsewhere. The dragons were magnificent; one bamboo in full leaf carved out of a thick, broad slab of wood, and set upright near an altar, was worthy of any artist that ever sculptured wood. The lightness and variety of foliage are admirable. This being Shinto, there were no colours to disturb the eye.

The great stones in the burn are of granite and other old rocks, some of a beautiful compact conglomerate. I could find none glaciated, in the burn or in a great wall built to surround the Shinto grounds with a rampart. At this temple great ceremonies are performed in spring. There was not a human being about the place in December. Walked back to the tea-house and wrote to Tokio and to Yokohama, by the regular post which has been established on European principles all over Japan. I was told that a regular report of our doings went from the local authorities to head-quarters, but I rather doubt the story.

Monday, 28.—Parted from my very pleasant comrade with a hearty shake of the hand, a promise to write, and a strong hope of meeting in Europe. Koiti the cook, and the little French squire, and all the goods and gear of the scientific naturalist, observer, and sportsman, took one road towards the Pacific; I and a single baggage pony, with my small squire mounted on wooden clogs, set off towards the China

Sea. But first we paid a formal visit to the gentleman who rules this mountain town. We did not see him, as he was not yet risen, but we saw his head clerk in blue, with his family arms embroidered on his shoulder as usual. "They are very polite people," said Carry, "they like to be politely treated; I always treat them politely." So, hat in hand, in travelling attire, we bowed, and desired the interpreters to express our sense of the mayor's protection, and our thanks for his extreme civility in reading our passports and letting us dwell in the tea-house. The official rubbed his shins and smiled, and then we all said "Saianara," and parted for opposite ends of the world.

At 9.30 A.M. started.—27°00'. 37°.—At 11.30 A.M. got to the top of *Suiogiri Tonge*, 800 feet; four and a quarter miles. The road was covered with frozen snow. The first three miles were over a combination of deltas, near the lake, which is very shallow, two and a half miles long and a mile wide. The hills all round are fluted with deep ravines and water-courses, and the lake is rapidly filling with stuff washed from the hills. I suppose this lake to be the result of some large delta washed into the course of the main river so as to make a dam. It may possibly be an old crater, or the result of an earthquake; it certainly has no sign of glacial action about it. From the top of the pass the view over the lake S. E. was magnificent. A lot of sierras, jagged wild peaks, rose behind the town and behind the first range, with clouds and snow on the hill-sides. To the right was a deep, dark-blue hollow under a cloud-bank, in which Fuji San was hidden. In the other direction, ten yards over the crest of the pass, the panorama of hills and ravines opening to the Chinese

Sea. As is usual in such views, there was the general smooth, rounded outline of the hill country, furrowed by branching water-courses, growing in size and depth as they joined, till they entered a main stem, and became a winding, serpentine river with many heads, in a broad strath opening to the plain. I have looked over the same kind of landscape in Scotland, in Norway, in Finland, in the Alps, in the Caucasus, in the American Sierra Nevada, and elsewhere. In all these mountain tracts, a rounded, swelling earth-wave, like a well-made road or a ridge in a field, has been carved into its present shape by water in the condition of glacier ice or running in streams.

From the narrow Λ -shaped ridge, at the parting of two V avines, I plunged down through snow and sludge and mud upon frozen ground to a village, eight miles. The people here, on the northern side of the hills, seemed to have a different character of face, and they wear a different dress. Travellers wore hoods and leggings and baggy trousers. In the village halted at a tea-house, and had a good luncheon of fish and rice and soup. My boy got three jinrikishas, and we set off at a good pace. But presently we got to deep snow in a wide strath. I walked five miles to another village at the mouth of a branch water-course. There, at the posting establishment, paid ten sens (about $4\frac{1}{2}d.$) for tea and *sake* and horse-hire to the next stage. There halted at 4 o'clock, as the sun sets about 5, and the next place is five miles away. Washed my feet in the street, while all the children in the place gathered to look at the foreigner. The landlord politely knocked his head on the floor, I stepped in, a paper screen was drawn, and I was installed. Here all about me, with my goods

arranged in their order, are crests of swells on the sliding doors of bamboo and paper. My feet are under a stong, toasting at the charcoal fire in the floor, covered by a stool. Inside of my apartment are endless rooms made of screens, and behind is the usual stone garden. Here I sit in the middle of Japan, all alone in the snow amongst the mountains, after a walk of ten miles and a journey of fifteen, at the end of my fifty-third year. If ever there was a time fitted for dreams, or for ghosts, or for something uncanny to happen to a wandering mortal, surely that was the time and place for a "manifestation," or for something to evolve out of inner consciousness. Solar myths, solar physics, and astronomy had their share of my thoughts, with the earth and geology; the powers of the air and meteorology; the Dragon myth, clouds and serpentine branching rivers; branching trees and tree worship, and reasonable botany; animals and their worship, beast-fables, and natural history; ancestors, Kami, and dreams; heroes and idols, and Shinto Kami; a divine Mikado in a tweed suit; Chinese philosophy and paper prayers offered to the sea; Buddhist inertia, negation, and repose; material action, force, energy, assertion, and negation of existence; the Koran, the book of Mormon, the spiritual press, and such like. All the lessons of more than half a century, scenes in the world's circle, people, and places, and past times, kept me company. The wind blew drearily, sighing through the wintry street; and I smoked and thought. I laid my head on a bag, and slept sound as a child. That was "Nirwana," the peaceful rest that follows on wholesome work and frugal fare. Not one quiver of mes-

not even a dream. Yet I am called on to believe that I ought to have been aware of "sympathy" with those who were thinking with me; and that I have only to interview a table or a medium in order to converse with those who did not visit me in my solitude, even in dreams. Of all the inventions of humanity, surely that solemn Boston spiritual *séance* was my strangest experience in real life. What other notion of a future state ever asserted that good spirits and bad, of great men and good, small men and evil, neither rise to worship nor fall; but wait about Boston to be called like jinrikisha-men at a stand, in order to inspire a medium with twaddle? The very thought was narcotic, and so I slept.

Tuesday, December 29, 1874.—*Motoyama* 32° inside; 30° outside.—27.000.—Gave myself a birthday present of a "Runic knot," or "Celtic pattern," here used as a teapot rest, and made of bamboo. It cost a halfpenny.

PATTERNS.—Community of artistic design is commonly taken as evidence of common origin amongst races of men. Western tombstones, and manuscripts of ancient date, are adorned with interlaced patterns which are called "Celtic art" and "Runic knots." Such designs also occur in Icelandic carvings, on certain rare kinds of pottery, in Byzantine churches, and on Persian bronzes. All these designs suggest basket-work. In Japan I found basket-work patterns of this sort, woven with bamboo grass, or with some kind of tough long fibre of even thickness. In this sample a circle is whipped with a long tendril split, like the work on a cane chair. At seven points on this hoop the lashing takes a double turn about a double line, which makes an open basket-work pattern of interlaced fibre. Two tendrils make seven double loops, and a seven-

sided figure in the middle ; and the ends overlap. The thing made is a Japanese kettle rest, but the design corresponds to designs in illuminated Irish manuscripts, such as the Book of Kells. I have got the design copied in silver.

In the nature of things it is probable that this kind of wooden weaving began where long fibres grow abundantly, and where ready-made vessels like pails and cups do not grow. Cocoa-nuts, gourds, large shells, and such like ready-made utensils do not grow in the North ; but birch-roots, ivy, honeysuckle, and other long fibres fit for basket-work, do grow there. All manner of creepers abound in tropical regions, but basket-work is best in the North. I have seen the very same design woven to make a net bag of tree roots, by Lapps in the north of Sweden, and by Celts at the Calf of Man.

Basket-work designs on pottery seem to record an early stage in Ceramic art, and Ceramics have flourished most north of the tropics. Even the Digger Indians weave baskets, and so did all manner of savages. A basket lined with clay makes the utensil fit for carrying water, which grows ready-made in the tropics. A Gaelic popular tale, known to old and young in the Scotch Highlands, ends with the task of fetching water in a sieve. A crow bids the hero stuff in moss and clay. Here in Japan I notice a constant recurrence of interlaced foliage in the painted ornaments of finished china-ware. Designs like basket work are an ancient British pottery ; but I do not remember to have seen anything of the kind upon the rude pottery of Southern people. Community of design in basket-work, and in arts is a strong point, rather pointing to community of origin

for Celts and Japanese, or to a common nature in humanity which arrives independently at the same inventions by following the same steps. A man in need of a pail carves one out of a block of wood in the North, till he has contrived hoops and staves. In the South the man picks up a cocoa-nut, and does not need to make pails or baskets for daily use. I looked at my kettle stand, and thought old thoughts about old designs copied from tombstones in forgotten churchyards at the other side of the world.

Manifestly this is the same kind of design as those which are carved on stones out in the far west. So these old crosses were basket-work at first.

Breakfasted on a "masculine stew." An old cock was caught, brought and paid for, but nobody would slay him or touch him. Massanao executed and stewed him. Waited for the baggage pony till 9.15. Then walked off up a glen on the strike of old hard rocks, N. 20° W., dip southerly, and nearly vertical. A passenger seeing me at work with strange tools, carefully examined the rock, and found nothing. Further up I found the same strike, N. 20° W., dip, 10° N.E., and the same rock. This great rounded, swelling country, which I saw from the top of the pass, was crumpled up like dough before it was shorn over the edges of these disturbed strata.

Stopped at a village and bought four shillingworth of combs. They were beautifully made of wood, and I got about a gross of them. The whole of this glen seems to be a manufactory of combs. At 11.40 got to *Niègnawa* up 200 feet in five miles; all on slippery frozen snow, with falling sleet. My beard was frozen all day. Got two coolies to carry my luggage, and paid sixpence for their hire, at a grand

post-house. Labour is cheap here in these mountains of Japan where men carry heavy back-loads up-hill for a good long stage for threepence, and make ornamented combs at four shillings a gross. Combs are mythical in popular tales.

At 1.30, 10 miles, 400 feet up, got to *Narai* at the foot of a pass. It was snowing fast, and blowing hard, 30°, and bitter cold. Got some beans and maccaroni and bought venison. Started 2.15, got to the top 3.5, in fifty minutes: a mile and a quarter, 650 feet. On this day's march rose 1,550 feet to 4,850 above the sea, according to barometrical readings. Ran down through the snow and halted at 4 o'clock at *Yabuharra*, fourteen miles. The road all day was crowded with pack-horses, and bullocks, and foot men carrying loads, or walking empty. All the travellers were muffled up to the eyes, and prepared for cold. Dined on a stew of *kamōshka*, the mountain goat whose hide and horns I bought below, and whose hind-quarters I bought at *Narai*. Tea and *sake* and dried prawns made my birthday feast. *Torri Tonge* is the fifth pass crossed in about 100 miles of road. Like the rest, it is a mere knife-edge between V ravines. A curious group of statues and stone lanterns, and a *torri* which stands on a knob near the water-shed, account for the name. The water sheds many ways from this pass, which is on the divide between the Pacific and the Chinese Sea. So far it seems that the mountains of Japan are like those of Oregon, a range of high ground four to six thousand feet high, much folded, and denuded and greatly worn by streams, with volcanic cones built on the older country. So far as I could see, and as far as I could learn from others, the islands of Japan are of the same general structure. The age of beds which

are disturbed, their geographical position and economic value, are as yet unknown.

Wednesday, December 30, 1874.—Yabuharra.—32° inside; 28, outside.—56·700.—Blowing hard, dark and misty on the tops. Started at 8.30, with a girl dressed in man's clothes to manage the baggage pony. Black frost and bitter weather. For lack of gloves put a pair of worsted socks on my hands. Walked five miles down a deep glen to ———, on ice at first, then upon a road frozen as hard as a stone, which had been mud, and was rough with the spoor of wooden clogs, straw sandals, and the feet of pack animals. Like everything else in Japan this "spoor" is unlike anything of the kind elsewhere. The clogs worn by everybody are soles of wood with two cross boards on edge, about three inches high, to keep the feet out of the dirt. These foot-boards cut two lines thus



and when the road freezes the result is a strange pattern, hurtful to feet in European shoes. At *Miomekoshi*, 200 feet down, in the post-house I saw a lot of rice cakes prepared, to be offered, one to each "kami," on New Year's day. Some were shaped like Bath buns, others like French rolls, a round base with a dome. All were white, some were large. Great lots of evergreens were stuck about the houses, shops, wares, and wayside altars. I was not prepared to find this familiar western style of decoration a Shinto custom in the mountains of Japan. Few of those who decorate Christian churches at Christmas time suspect that they are performing a Turanian

pagan ceremony. "Good wine needs no bush," proves the antiquity of another English custom. But this seems to be older than Shakespeare, for here in Japan a bush hung over a door means "*sake* for sale." "Clach a'd charn," a stone on your cairn, is a Gaelic phrase meaning "for service done may some one add a stone to your memorial cairn." Here small piles of stones are at the foot of every image and memorial stone, and on every altar by the wayside. "Suppose one dead, children put up for fathers and mothers. Jesu (a name of Buddha) help them in next life." So says my squire. Rags are hung about wells in the far west. I have seen a whole grove of crutches and sticks planted near a holy well in Ireland, with votive rags fluttering from them, offered by pilgrims to the well which some holy man had blessed with Christian prayers. Rags are hung on bushes about holy wells all over Scotland, and even in Wales. Here in the far east I find strips of cloth, bits of rope, slips of paper, writings, bamboo strings, flags, tags, and prayers hanging from every temple. Now, at New Year's time, I find the streets and houses decorated with evergreens, and the evergreens hung with slips of paper fluttering in the breeze like the votive rags of the far west. The living custom explains the custom which has lost meaning. Presently I met a lot of pilgrims returning from a distant shrine. One who was sick was carried in a cago by two men. He was in a black paper box, slung on a pole, to keep him warm. Each man had a paper parcel, about two feet long, slung under his chin and crossing his breast like a broad lath. It contained a picture of the kami to whom the shrine visited is sacred. The procession marched
and my wandering fancy carried me off to many

a distant place of pilgrimage in Europe, and to the olden time, when Canterbury pilgrims were at home. These Japanese islands have been closed to the world. I walk into the hills, where western influence has been least felt, and find all these old western customs, which are fading away at home, in full force as real eastern habits and pagan customs; and once more I am driven, by another road, to some common origin in the old world, for all these human inventions and customs.

At 12.30, at *Kushima*, after walking ten miles, stopped in a considerable town to shop, and stare. Bought a string of birds for the larder. There were redwings, bullfinches, grossbeaks, or their Japanese equivalents, and birds unknown to me. I skinned one for his feathers, while the landlady of the tea-house cooked a lot for tiffin. Meantime the baggage went on alone in perfect faith and perfect safety.

My squire went to the post-house, got a horse and a man, and a bit of paper, and away went my box with about 100 gold coins in it, and all my worldly gear, to be delivered at the next stage on presenting the receipt. Nothing ever went wrong in Japanese travelling. My luggage usually went astray when I came home and travelled by rail in England. I booked and paid for my luggage, and took a ticket for Greenock and a place in a sleeping carriage, at Euston Square. I was put into the Edinburgh carriage, and got out of it in time. My luggage was sent to Perth. I got to Greenock and had to wait while telegrams went seeking the lost goods all over the kingdom. They came properly ticketed. Travelling is easier abroad than it is at home, according to my experience.

The birds are caught in this fashion. A slender bamboo joint is smeared with Japanese bird-lime; I believe it is made of rice paste. The bird-catcher, with his bundle of sticks, sneaks about the trees till he sees a bird in the branches. Then he joints up his bamboo rod, till it is long enough to touch the bird, and he being touched is taken. I sat by the inn door with my feet in a square hollow near a blazing fire of sticks, and all the children in the neighbourhood gathered to see me eat my roasted birds with a big knife and chopsticks. When I looked they fled, to return like the waves of the sea. I dropped a chopstick into the ashes. The landlady picked it up, ran out to a water-spout, washed it and gave it back with the pleasant smile of a polite hostess. These are the politest people in the world. The whole street was gay with evergreens, and the picture of Japanese life in the hills was charming. Walked on down a beautiful glen called *Kiso no tuni* by the river *Kiso no kawa*. It was green, clear, and rapid. Presently I came to granite boulders rolled; then to granite rocks, and then to an anteclineal axis of light-coloured syenite, crossing the river and the glen. Strike E.W. In this part of the country the folds in bent strata correspond in direction to the long axis of the southern end of Japan. The course of the rivers has nothing to do with this geological structure. To the east towards the Pacific are tall granite hills much waterworn. In this direction is Fuji San, and the eastern corner of Japan. By the light of Mr. Judd's paper on the Secondary Rocks of Scotland, I took these to be altered rocks the roots of older volcanoes which have been worn away. At 4 p.m. halted after a walk of sixteen miles to the south of M. ... where ... camped in a

small tea-house after some jaw, in which I thought that I recognized the element of squeeze.

Thursday, December 31, 1874.—*Amyamatza* ; 25° inside ; 20° in the garden ; 27°300 ; about 3,500 feet above the sea. My breath froze on my fur pesk all night. My morning tub, as usual, was rigged on the boards in the garden. The water spilt, turned to ice in a few minutes, and made the boards as slippery as the butter slide of the pantomime. In good condition once more, able to walk without fatigue, and to stand the cold, and to enjoy this wild life beyond description. A very fine, bright, clear day. The bells tolled magnificent clear musical notes, as they do everywhere in this country. Some are as fine as Big Ben, the last effort of English bell-makers, yet this is a small mountain town. Started at 8.30, and walked down the glen, rejoicing in the clear air and brilliant fresh weather ; admiring the grand Japanese hills, with their snowy sides, and evergreens, and bamboos, and pines. Every step was a picture, every man a study. Found some old rocks, and made the strike S.W., N.E., dip N.W. Syenite was abundant. The growing river was worthy of Norway. The bed of it was a wide wilderness of great rolled stones, like those which line the banks of the great northern rivers of Europe. The water was clear and green as Niagara. Every house, and every stone altar, and stone, and image was decorated for the new year. A couple of bamboos, or two young pines, or two branches stuck upright with a straw rope between, made the "torri" or perch for the birds, the frame on which hung strips and sheets of white paper, bunches of three straws each, green leaves, little conical bamboo baskets, with offerings of rice in them. Little paper prayers, neatly

folded into squares like notes, were stuck in cleft sticks, and hung up. These decorations were everywhere. The village streets were like small boulevards, with a "torri" of this kind at each door as high as the eaves. The great inscribed stones by the wayside had their decorations of green leaves and red berries and white paper. Of these stones, one recorded that, on the 23rd day of the moon, somebody had there seen the moon rise. It really was strange to see all these "Christmas-trees" in Japan. In Yedo they are more magnificent. They are taller and bigger, hung with fruits and lobsters, and gay flags and colours, all offerings to the Kami. My squire grew eloquent in describing the New Year festivities of the capital, and I listened, and pondered, and wondered why I had never heard of all these things, which are common to the East and to the West, and may explain so much that needs to be explained. I noticed a rack for drying rice, exactly like those which are commonly used in Sweden. It is a lofty grating, made of poles. A story might travel from mouth to mouth, a missionary might suggest something which his hearers might alter into some vague resemblance to a Christian ceremony; but all these various practices, together with a foot-plough, a corn-rack, a quern, a bush for signboard, and such like inventions, must have come together with the people from somewhere to the Western Isles, and to these Japanese hills. The customs of Central Asia ought to explain much. I bought half a pound of fine-cut tobacco for seven sens ($3\frac{1}{2}d.$), and by the help of my squire had a long palaver with the merchant. At 11.45 at Suwaya nine miles 27.800, 5 (4) ... The ... and the ...

ns. Here we got a fresh pony, and walked on down this magnificent glen. It is fifty miles long. Presently we came to a skin merchant, and bought the teeth of a bear, and a skin. A little further on we came to the house of a hunter, with a newly-slain hind. There was no hurry, and ready to say, "Come on;" so we walked in, and sat down, and bought venison. The hunter in blue sat on his counter and the deer, carved from the haunch, and weighed out pounds. A brown foxy dog sat and looked on, while the light from the snow shone in, and made a Rembrandt. The fire made to blaze, the tripod stewpan was placed on the hearth, and the hunter made a stew that lives in my memory as one other meal eaten at Xeres. Venison and *sake* in Japan, wild boar and sherry in Spain, with health for sauce in 1841 and 1874. We feasted together, and all intermediate feeds vanished. A "*kamoshka*" in his hide lay beside the hind, and we bought five skins of this Japanese non-deer for five dollars. My hunter has a pipe, with which he smokes the deer. He blew a long wailing whistle, and some time. The goats go in parties of ten or twelve, and haunt the steep tops. They have polished black hooked horns, like reindeer, black hoofs, and dark, shaggy, warm, furry jackets, for cold lands. A white creature, of like shape and habits, is found in the Rocky Mountains in America; and something of the same kind I saw in the museum at Tiflis on the 10th of November, 1873. Looking to natural history as one more source of knowledge, it seems that a general resemblance can be traced in the wild creatures of the northern parts of the northern hemisphere. But there is no creature in Japan, so far as I know, that is identical with the western variety; and

there is no creature in North America that is exactly the same as the equivalent in the old world. Ravens are said to be the same everywhere. I never met a Japanese raven, but Japanese crows abound, and their croaking and behaviour is Japanese. Voices, and languages, and inventions, myths, machines, and creatures, all seem to have had a common ancestry, though they have varied in travelling from their common home round the world. I sketched my hunter with very stiff fingers, and coloured him at camp. Full of old baccy and fat venison we saluted our host, and walked on after the baggage, which we found at *Nojiri*, 27-400, 600 feet down in 14 miles. At 3.30 p.m. as no horse was to be had we halted. While waiting I sketched an old woman shaving the head and making up the tail of an old swell, who sat in the evening sun at the door of his house, surrounded by children. I coloured my pencil notes and wrote up log till 5.30, with my feet under a stong, beside a fire as usual. Then came a dinner worthy of an alderman, venison and tea; and a cigar kept for a grand occasion. The last day of 1874 was marked with a white stone. Grand bells tolling, children singing, all was alive and cheery in this far eastern glen on New Year's Eve, and I was merry as they were, with my own far away people, ringing in the new year, and singing out old years, and thinking, and drinking tea. Man never is less alone than when alone. I wished everybody a happy new year, and once more sought the nirwana of sound sleep.



THE BARBER'S SHOP.





MY CIRCULAR NOTES.







Photo
taken at Fushimi 9. 1675

MY CIRCULAR NOTES.

EXTRACTS FROM JOURNALS, LETTERS SENT HOME,
GEOLOGICAL AND OTHER NOTES,
WRITTEN WHILE TRAVELLING
WESTWARDS

ROUND THE WORLD,

FROM JULY 6, 1874, TO JULY 6, 1875.

BY

J. F. CAMPBELL,

AUTHOR OF "FROST AND FIRE."

IN TWO VOLUMES.—VOL. II.

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MY CIRCULAR NOTES—1875.

"Here 's to the year that 's awa'."

Friday, January 1, 1875.—*Nojiri*, 28° inside, 26° outside, 3000; snowing, blowing, and misty; 2,800 feet above Tokio estimate. Last night grand bells tolled, children sang out the streets, cocks crowed at all hours, and I dreamed of them, because they awoke me, I suppose. N.B. Not one of these dreams has come to pass in 1875. I note the fact, September 24, because I have been bothered all my life to come true in dreams, and cannot do it to please anybody. Woke at 8.30. At 10, in a side-burn, found rocks bare, and the strike N.S. and the dip West. It seems that these rocks are not folded in any particular direction, but crumpled. Passed a mile-post 55 Ri to Kioto, 75 to Nara; 130 Ri = 325 miles; 187½ miles done, 137½ to do. A grand old stone Buddha stood by the burn side, with a sword and epaulettes, and a muff of snow on. He stood on three steps under a tall, dark-green pine-tree, with the road winding below him, and a bridge in the foreground.



At *Midono* got some New Year cakes in hot broth, and watched the proceedings in the kitchen; 28-350, down 350 feet, upon bad slippery roads. I sat at the door of a tea-house, with my feet in the square hole with the usual fire in it. All the children were smart with red top-knots in their black hair, and with glittering sham flowers stuck about their heads. The streets were hung with flags, most of the same pattern, and dressed with bamboos, pines, and paper. About noon the sun came out, and the rest of the day was fine and warm. At 12.30 reached *Mamone*; 28-400, 400 feet down. Here the big river takes a swing westward, and the road goes up a branch stream. In it gangs of lumberers were busy shooting logs down slides and through dams. They were very picturesque and wild, and very Japanese. Here is another contrivance common to all northern mountain countries where men fell trees and use them. The Japanese are so apt to learn, that some engineer of ancient or modern times may have taught them this amongst other arts, but if they have learned from foreigners, they have adapted their learning to their own land. I walked up 1,200 feet in $3\frac{1}{2}$ miles, to 27-200 = 3,600 feet above Tokio. From the main river to the top of the pass the whole burn was turned into a slide for logs. A number of logs were laid together in the bed of the stream so as to make a curved trough sloping at a considerable angle, and a dam in the watercourse. At the top and bottom was a pool, and the logs were wetted by the stream. A lot of men guided a log through the pool, and launched it on the slide by hauling with poles shod with goat. The log rushed down and plunged headlong into the pool at the bottom. The men then pulled it up and took it to the

Another gang guided the logs to the next slide. For the whole distance, this deep steep gulch rang and resounded with the deep-toned musical notes which come from logs when they jostle and strike hard blows in the water.

There must have been many hundreds of these slides at work, and a great forest was going off to the sea to be floated to the sea in rafts, and to be transported to Japan. I was told that the timber was to be used in rebuilding the Mikado's burned palace, of which I saw the foundation stones in the heart of the castle. I got to the top of the mountain in an hour and a half on slippery trodden snow. The

timberers clustered about fires of aromatic chips, were very interestingly picturesque, and very wild-looking, strong little mountaineers. I know that I was a stranger in their eyes, possibly I was hateful. They hardly deigned to look my way, but when I gave them the salutation "Ohio," they answered politely, and went on boiling their rice or shunting their logs. In the north, in Norway, in America, and elsewhere, I have seen many timber slides, but none quite like this. It was a new species. On the top of this "Tonge," looked out over a vast plain with hills to the right, pointing my western way, and with tall dark hills to the left in the eastern distance of Japan. It was a magnificent view, but it was too good to admire it. We trotted to a Tchaya near the top of the mountain, and got some rice and tea from an old lady, who charged three farthings a head. Then we trotted down-hill to a picturesque village, with a long steep street facing the rising sun. There I sat in a porch and sunned myself. The Massanao and the post people got a fresh pony. The

difficulty is that nobody wants to travel or work on New Year's Day, so they have to be bribed.

All this day we have been meeting parties going out to visit their friends, in their best clothes, young men and old, women and girls, all laughing and out on a spree, as they used to be in the Highlands of Scotland on this same festival of the New Year. Some were slightly elevated with *sake*, and the evening was to end with music and more *sake*, and a general lark. I insisted on tipping my men for sympathy; not a cross word or a sour face did I see on this Japanese holiday. The sunset effects were beautiful to the eye, and pleasant to enjoy, but horrible to the feet. The whole road on this southern slope, was a quagmire of mud and snow. I ran down as fast as I could trot to save daylight, and washed my feet at a door in the dark, at 5 by my watch; 29.000. We had got down 1,000 feet since morning, to a big river, and to a large town—17½ miles; 140 on foot, since I got to the hills. The river which I left went to the west—I left it on the right. The large river which I got to, came from the west, and from the right. I thought it must be the same stream. I found afterwards that it drains a tract round which the big river sweeps westwards, to turn southwards to the Pacific a long way further on.

Saturday, January 2, 1875.--Utchiai. I had found my way into a magnificent tea-house. The sliding doors of my sleeping-place four in number were adorned with four excellent pictures of falcons, life size. They are the best that I have seen. In the room is a sacred corner where pictures are offered to the house kami, I am the

prieter of a Highland house brownie myself, who used to have offerings. Over my Japanese sacred corner hung a famous picture of a quail, or his Japanese brother, with his mouth open. Beneath that roll picture was a small table with a clean sheet of fine white paper spread on it. Thereon were placed three holy white cakes of rice-flour, with an orange on each, a light burning, and some rice in a cup for the household. At the door stood the arms and armour of the grandfather of my host. The suit was beautiful; made of silk and plates of steel, and chain armour. Helmet and all, was set up on a stand in the porch with an offering of rice-cakes in front. The house seemed endless, and used to be a daimio's haunt in the days when Daimio's moved in solemn procession from their provinces to Tokio, along this Nakano, or middle mountain road. I was told of a Yankee who passed this way, with five cagos, three servants, a wife, and fifty coolies to carry him and his following and his provisions. He was the last notable lodger. I have been often taken for him along the road, and saluted as a friend of the nation, in spite of my humble equipage. I have heard of no other American who was a tradesman, I think a clock-maker, who walked alone. In crossing the Uda Tonge, he slipped off the trodden path into a snow wreath, fell and broke fast. A Japanese traveller found him, and tried to pull him out, but he was too heavy. More came, and finally the traveller was set on his legs, and got safe out of his difficulties. These are the only two foreigners who have passed this way for years, so far as I can learn. Last night the whole family came in to see me write up my log. I stopped and showed them all my pictures, and all the foreign curios

that my pockets contained, watch, knives, instruments and money. With a very few Japanese words we spent a very pleasant evening, till I bade them "Saianara." I first put on the deer skin pesk, hood and all. Then, with much giggling and pretty speeches, the whole family slid out through a sliding door, and I rolled on the floor and slept among the falcons, and quails and holy cakes, and altar lights, protected by the kami. Even my own brownie failed to awake me. I suppose that this house could have lodged a hundred men easily. The sword racks showed the guests who used to haunt the house before the revolution.

Start 8.30 A.M., 35° inside, 32° outside; 29.000. Walked up 200 feet, then down and up as much; then down to a long straight town, in a plain, all swept and garnished, and hung with flags. The evergreens were set as usual in small mounds of sand. Every man, woman, and child in this region and, as I am told, in all other regions in Japan has done something for the decoration of some favourite place, and has made some offering to some kami or Buddha or Buddhist saint. It is a national festival, and I have the luck to see it where foreign ways have not yet crept in. The only foreign influence is in the date. Since the revolution they have given up "Old Style," and taken up the new. Not to be Christians their day of rest is Saturday, in other respects their dates are made European.

Walked through the town with *Kasengi* mountain to the right front. Here the country changes to volcanic ash, with ridges of rolled pebbles, resting upon granite, some of the pebbles which I took for volcanic ash at a distance, I now suspect are really the debris of decomposed granite. We

ed a china factory where I bought a *sake* bottle for 1½*d.* as a sample of beautiful ware. At 1, halted for tiffin nine miles and a half of up-and-down road. Then went the thirteen tonge stage of which I have heard a great

The strike was N.W. S.E., dip S.W., rock gneiss. The ce was shingle and clay with beds of pumice, and bare w banks of clay, all cut into deep ravines by running r. A railway bank after heavy rain will give a fair idea is Southern Pacific slope. The country reminded me of and with its brown hills, green pines, and yellow bamboo t. The view looking back towards the high hills was

nificent. The whole land was deeply scored with ravines f one V pattern, and the evening light brought out the s in colour. At 4, sat me down on the grass and sunned lf. Rice was bearded in the fields, birds were twittering e trees, water was purling in the brook beside me. It a still, quiet, beautiful warm evening without a sign of vinter which I left in the morning. 48° on the grass. At et made *Kangaia*, washed my feet, and camped in a new ouse, as clean as a new pin. All manner of quaint es hung about the room. I noticed an offering to the whose god is *Ido kami*, and other offerings in strange ions. The sacred corner, the place of honour for hang- ictures, is to be called *To ko no ma*. There is the house- altar, *Kami Tana*—god's shelf. Walked fifteen miles, 0. This westward route along the base of a range of tain passes over a series of ravines cut by streams, and dividing ranges make the "Tonges."

nday 3*rd.*—Made a late start at 9, 37° inside, 39° out; 50. Fine, cloudy. After a while it began to snow, then

cleared up for the rest of the day. Passed over granite ridges in which the stone weathers into great round blocks. Suspected ice-work, and hunted till I found out the cause to be weathering, or old sea-work. The dales were full of decomposed granite sands which make raw bare scaurs amongst the rich green shrubbery. The vegetation was beautiful. I made a rubbing of a fern leaf which I had never seen before. The plant grows like a star. All manner of shrubs which I have seen in greenhouses flourish on these Southern Pacific slopes, and feathers of bamboo rise high amongst the shrubbery. Green pines with red stems abound, and generally the day's walk was very interesting. I longed for a botanist to teach me the knowledge which every traveller ought to have, and I lack, worse luck. Stopped at a pretty village to drink tea, dozens of girls and children came to see me feed. I asked one pretty girl to come to England. The news of the proposal was carried to her father over the way at once. I believe they thought my intentions honourable. Papa laughed a loud horse laugh. I bade them "Saianara," and went my way. Passed a shrine with thirty-three *Koshiri* carved on granite blocks, each about two feet high. They were ranged in rows on shelves, some were coloured, some had four arms, some wore mitres, some had curious head gear, and some were exactly like mediæval Romish saints in vestments, with glories. Beyond the fact that they were "koshiri," I could get no information about these personages. So far as I could judge they seemed to be representatives of the idols of many a pantheon, all turned into disciples of Buddha, or Shinto kami. I gave it up. "No sabe."

Stopped at 1.30 eight miles and a half got some food

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If any foreigner would like to try that little game in England, I think we could promise him a broken head, or a mad baptism. Not one rude act did I extract from all these merry Japs. Two merchants presently appeared with curiosities for sale. They had magnificent crystal balls, pictures, swords, and knife handles, said to be gold, but manifest brass. I invited them to my room, and with Massanao, had a long talk, but no deal. I had bought a curious old book for a trifle at a shop by the wayside. It cost sixpence, I think. A man followed us, and asked if I had really bought that book. My squire said certainly. "I have been trying to buy that book for a very long time," said the collector, "but it was too dear, and the shopkeeper would not cheapen it." Then as he was much grieved, he laughed and trotted off down a side road. The news of this magnificent purchase spread, and the merchants followed many miles. I had not got enough of Japanese money to be able to spend a hundred dollars on crystal balls, but they were the finest I saw in Japan, and well worth the money to a medium or a merchant. As to kami: At one door I saw three saddles, one of straw, one pack-saddle, and one gorgeous with lacquer, gilding and red leather. In front of them were two holy cakes, and an orange. This was more than curiosity could endure, so Massanao was cornered and made to explain. He said:—

"That man live by horses, so he offers a cake to the kami for custom in the new year. A merchant offers a cake beside his book, a shopkeeper by his goods."

Accordingly, in fact, every shop had a couple of votive cakes and an orange placed amongst the goods, just like our

wares. "A soldier offers a cake for his sword, and one for each weapon of war—bow, arrows, spear, and so on. A householder offers for his fire and well, and for each part of his house." That is all very fine, but I could not find out then, and I have never found out since then, whether there are as many kami as objects and places, in respect of which offerings are made, like patron saints; or whether some special divinity is propitiated with cakes and oranges for the benefit of the vendor of provender, or of the soldier who rips up the eater, or whether all the offerings are made to one kami of the season, or to one God.

The people in this house objected to have my venison cooked at their fire. It was unlucky, or it was wicked, or unclean according to their faith. They had no objection to cooking birds. Accordingly an old cock bound with a straw rope, was brought for sale, and execution. He was released as too tough and too dear. A chicken and some redwings were substituted. I dined and wrote up the log of a curious day by my candle on the floor.

Monday, January 4.—Hosukthe. 32° inside, 30° out; 28·600 = about 2,200 feet above the sea. Bought a lot of queer things. The crystal balls are said to be worth twenty dollars each in the place. They have double refraction, and are very fine stones. The crystal is got on Carry's Road to the east, and is there worked as it is at the chief towns. These ornaments are to be placed in the sacred corner on state occasions. I wanted small portable samples of Japanese art not precious stones; so after more talk I left these curios for future travellers. As merchandize I might have made a good thing, I believe.

Started 9.25 ; one curious feature in the landscape hereabouts is the rice-field. The bottom of every glen is banked up, and the banked-up flat ground is irrigated. Each little field becomes a mirror, dotted with rows of roots, and the curious curved steps and narrow patches make a fantastic mosaic, like shining tiles, or fish-scales set in the brown hills at the bottom of winding ravines. I was constantly reminded of a water-dragon couched in a glen. The roads were good, and in good order, and the air fresh. We walked merrily, Massanao on his native clogs, as he had worn out his European shoes. I walked fast, and the little squire held his place easily. To keep his toes warm, his feet were in pockets of fur, sold for that end at the shops. We stopped for Tiffin, and I amused the natives with a burning glass.

They are a most ingenious curious race. My old briar-root pipe excites great attention, and everybody wants to see how it is made. It is so vast in comparison to the Jap pipe, that they always laugh when the big pipe is filled. "Big man, big pipe," they say. Shoes also are great curiosities ; mine certainly are, for they are nearly worn out. After ten and a half miles, we got to a station with jiuirikishas, but walked on, three and a half miles in an hour. We got to a river, and there the clogs came to grief amongst the large stones. Horse and all we crossed the river in a boat. It was a grand stream, much grown since we parted a few days ago, and alive with boats of curious build, with high sterns. Many were sailing and punting up stream. This day, at about the usual level, we passed more banks of shingle. I suspect an old sea-margin along the base of the Pacific slope, between the mountains. At the mouth of the river was a kind of indu-

ed, stratified clay. Strike N.E. ; S.W. dip ; S.E. towards the sea. Halted in a large river-side town, where was a band shindy out on the shingle-beach. They were celebrating the launch of a new boat. "All the children get cakes ; all the young men get drunk on *sake*," says Massanao. There must have been a hundred of them at least, all in the same way as usual. The New-Year festival ends to-day. All the evergreens are down, and chopped up for fire-wood. Instead of meeting groups of lads and men going on the spree in the streets. I have not seen one drunk yet, nor heard a cross word spoken since I started. I have not met with an uncivil act. I have seen strange sights ; but I don't care.¹ The vegetation this day was very rich in evergreen shrubs. Camellias and other flowering plants were numerous in the bushwood. The shops were full of dried persimmons and excellent oranges. Mine hostess here again objected to the roasting of venison at her fire. She further objected strongly to my unclean presence in the kitchen, as I afterwards discovered. My squire got up a private fire in the veranda, and together we cooked. As people ask often how men fare in Japan, this was the feast :—Venison, potatoes, onions, rice, and carrots, made into "hodge-podge." Fresh fried fish, an omelette, a sugar-cake from Asamayana, dried persimmons,

¹ These proof sheets came to me after a year, at the same season in 1875-6. The resemblances between New-Year festivities in Britain and Japan once more strike me as very remarkable. The paying of bills, and visits, the giving of gifts, the feasting and drinking, the singing and dancing and dressing, the decoration of homes and holy places, the holiday, the tolling of bells, the tickers, the midnight singing, and many other small matters that belong to Old Father Christmas, are being enacted over the way by Japs and Chinese. Even "Christmas cards" are but modified Chinese civilities.

oranges, tea, and one solitary biscuit, a gift from the stores of Carry. There was not a bit of bread within a hundred miles. All were excellent in their way; so men need not starve in Japan. Walked fifteen miles, 30·300; down 1700 feet from last halt, 500 feet above the sea. Here begins the shelving Pacific plain, with high snowy mountains to the right, the back-bone of Japan, reaching as far as I can see westwards to the north of my route. Down the river is the third largest town in Japan, with a five-story stone castle in it, from which was taken a great golden fish monster, which is now in the Tokio museum. The Tokaido, or east-coast road, passes through this town. I stick to my own road, on which I have walked 178 miles.

Tuesday, Jan. 5th.—*Ota*, 37° inside, 32° outside 30·400 rising barometer. Say 400 feet above the sea. The people thought me a wild savage for cooking venison in January. We had to wait for a horse, so I walked to the river and watched men shooting the rapids on small rafts and in small boats, a tail of children followed as usual. At last I set off alone, and wandered along the river-side admiring. When the baggage pony came we set off down a gorge where the rocks are flinty quartz in thin beds greatly contorted. Strike N.W., S.E., after passing a col we came to red sandstone, but found no fossils. The people met on this march were chiefly picturesque gangs of watermen carrying oars, steering-paddles, ropes, and such like gear. They had been down the rapids with small rafts, and they were going back, to lead more timber through the big river to the great sea. Their work was part of the foresters' industry which was going on further up. At this rate the forests will soon be exhausted for the hills are not thickly clad.

At the gorge is a beautiful little shrine in a small cave. I went up the stone steps and drank tea and rested, with a vendor of cakes. A countryman came in and threw some cash into the usual grated box. Then he squatted on his heels and prayed to Buddha, rubbing his palms. Then he got up and ate, and came to drink tea and eat cakes. This is the first praying man that I have seen in Japan, so I note his proceedings. He had no objection to my heretical presence; we had our sociable cup of tea and chatted pleasantly. It seems that my voracious appetite for venison is the unclean side of my foreign character in the eyes of orthodox Buddhists, who prevail in this region. "They know nothing at all; they are old-fashioned people," said my squire. Went down the stone steps and found the usual stone rail, not built, but deliberately hewn out of the solid to imitate a plain wooden rail. The Japanese are famous carpenters, and their masonry and stonework is all an imitation of woodwork. The rock carving is a striking illustration of that fact. When we left the river and mounted the col, we looked over the plain at last. We got down to a village and ate boiled fish and rice. The wife did not clean her fish because I was to get some medicine inside. This carnivorous diet of worms is the custom. A fish-bone stuck in my throat, the sympathizing hostess bade me put the fish's head on my head to cure me; I preferred to swallow a lump of rice, but I learned something about Japanese surgery.

We had got to jinrikishas after 184½ miles on foot. The manager of the service made a bargain, and beat a big drum thrice to warn three athletes to prepare. When they were ready we started on wheels. We drove over a moor studded with pines and bamboo, in a snell wind for ten miles. I meant

to go on, but as some fair was up, no men could be got, so halted at half-past three at *Kanò*. This was a long town in which was a Daimio's castle, which was pulled down. At the gate I spied a curio shop, so I bought. In the evening men came with more goods for sale, and we spent a pleasant evening round a shibashi. I was greatly tempted by the Daimio's saddle. It was all gold and red and lacquer. The stirrups were iron inlaid with silver, and real works of art. The merchants promised to bring more goods if I would wait. So as there is no particular reason for going, I stopped.

Wednesday, 6th.—Kanò. Camped in a quiet little tea-house in the main street with quiet friendly people, who gave me a neat little hand-box of a room opening on a small back garden, where the sun shone. The front of the house is a kind of eating shop, where viands are stowed in vessels for sale. 40° inside, 30°-550, about 250 feet above the sea. Bright and sunny. Spent the morning in packing purchases, and in writing with doors and windows open. After a while came the merchant, who led me a mile to a big house, whose owner, a merchant, had lost heavily in rice speculations, and wanted to sell all his rich possessions. He was at home, and gave us tea and cakes. The house was within a moat and rampart, built of earth and rolled stones. We entered by a gate, over which hung curious weapons with hooks and spikes on a long pole. These, it was explained, were intended to roll up in the long sleeves of enemies who might attack the castle, and so overpower them. A side door let us into a dark passage, where clogs and boots were left. My friend the merchant came in; two others, who had been leaving ambassadors all morning, stayed outside. We entered

Japanese room of the usual kind, but with some desks and
s, and European gear in it. We sat on small Persian
ts spread on the mats about the shibashi, till our host

The rich merchant evidently aped the Daimio in his
s, but his dress was the usual Japanese costume. He
in and smoked, and conversed with my squire, who
a Samurai, had all the manners of a polite gentleman,
ots of small talk. I sat and smoked gravely, drank my
nd now and then picked up a sugar-plum with chop-
s, and made shift to pop it decorously into my mouth.

host said that he had several "godowns" full of gear;
tunately two officers of the government had arrived as
s, and he could not show me his goods. I was sorry for
oor fellow, and sorry for myself, as I hoped to see what
a merchant considered to be worth collecting. I made
est bow, which had begun to assume Japanese pro-
ons; and then we all walked back to the town and fed.
he rest of the day I held a levee of vendors of curiosities.

came in and sat and smoked, and produced wares of
value—gold, and knife-hilts, and porcelain, and em-
ered dresses, lacquer-ware, bronzes, and pictures. I
it some and bargained for more. Had I but known
alue put on such things at home, I might have made my
ls happy. There was a blue satin dress, embroidered
life-size brown lobsters in silk; a blue satin wedding
with trailing skirts, on which were embroidered, in
nd gold thread, an old man and an old woman. One
sweeping, the other raking autumn leaves. The idea
ssed seemed to be long life and a pleasant old age.
y wear when glad; live long time," said Massanao.

There were many other grand dresses, but these were the best. The figures really were works of art, pictures in thread equal to anything of the kind that I have seen in Europe; better than anything that has been done in the School of Art, so far as I can venture to judge.

I only saw one bit of Japanese embroidery to equal the work. That belongs to a friend in Tokio, who found it in a shop where old rusty iron was the chief merchandize. It represented the legend of the arrival of their ancestors in Japan. They were in their boat bringing the favourite products of the country. One had the "Tai," which is the favourite sea-fish; another had a deer, another a falcon, and all the rest of the patriarchs held their different properties, and were dressed in the mythical clothes. The faces were characteristic, with varied expression, and the action was good. The needlework followed the drawing, like the lines of an engraving. That was the best bit of needlework that I ever saw anywhere. My Kanò figures were nearly as good. I bought in Tokio an old dress for 1s. 3d. A lady at home valued it at 8l. to 10l. This dress was worth a dozen of it, to my mind. One of the pictures was a roll which reached to the outer door of the second room. About a hundred highly finished miniatures represented a play at court. It was very curious, for obsolete Japanese costume. I bid for the lot, but missed it. My travelling purse of Japanese paper money was slender, and English gold was worthless in Kanò. Even after I had gone to bed, men came with goods to sell. These were the spoils of the Daimios' town; possibly some of the properties of the ruined merchant who bought them, possibly some of the properties of a thief, which was close to him. With time and money

I might have furnished a museum. As it was, I learned a good deal about Japanese art. The shop was a queer place, hung about with Daimios' luxuries: lacquer-ware luncheon boxes, ink stones, and boxes of sorts. I went into the back premises, and box after box was unpacked with the utmost good humour. Ancient Chinese plates and dishes, and Japanese ware with marks, which my man could read. Red lacquer Chinese tables, horse trappings, arms, armour, swords, spears, roll pictures, carvings, buttons. Out they came till I was puzzled how to fit my purse to the temptation. I did not know how to carry them, or pay for them, or what to do with them all if they were mine, so I bought some things which pleased me most and departed. A swell in European clothes had been riding about on a good horse, on a grand saddle fit for a Mikado. As I went away from the back shop I saw the horse being groomed. A man in a waist-cloth was washing the steed all over with hot water, and the brute seemed to enjoy the bath as much as the man. They made a grand picture in a cloud of steam which rose from a tub, and from the horse's hide. When I got home I dressed my landlady in the wedding-dress, and the worthy matron posed as the Japanese lady who appears on porcelain.

ART.—I have now been hunting for objects of art for a good while, and my knowledge may be of use to purchasers. A great many cabinets are preserved as Japanese in England. I know that some are Japanese, for they were sent as gifts by the Japanese government, and they are preserved in English palaces. Others were brought home by sailors and merchants, and are preserved in the houses of their descendants. All these may be genuine old Japanese furniture,

because I find pictures of such things in old books, but I suspect that most of them were made for exportation, because I never saw such an article of furniture in a Japanese house.

There is no furniture in use there now, except the "shibashi." That is a contrivance made of wood, or china, or brass, or bronze, to hold fire. It is carried about the house or stands in the porch, and people sit about it on the floor warming their fingers, and lighting their tiny pipes, conversing, writing, working, or idling, from morning to night in cold weather. The shibashi is the commonest article of furniture in Japan, but I have never seen one in England. A great deal of good art is expended on the decoration of these fire boxes.

I seldom saw porcelain plates or dishes used at meals. Fish and eatables are commonly exposed for sale on such dishes, and many of them are beautiful. Sweet-meats, and sugar-plums and dried fruits, sometimes, but very rarely, appear on porcelain. The dinner service which came to me was always lacquer. The foundation of the cup, or bowl, or rice-box is wood, admirably turned. The lacquer is laid on with a brush, and is often decorated with figures of birds, tortoises, cranes, falcons, and other such designs in gold or colours. The varnish stands heat, so that soups and such-like appear in lacquer cups with a cover. Fish are served in lacquer trays, rice appears in a box with a cover. Meat appears in the iron vessel which cooked it. Each guest has a small tray-table of lacquered or varnished wood, on legs about three inches high, on which the dinner is arranged, with new chopsticks. Knives never appear; spoons are so rare that I bought one of porcelain for my own use. The fashion

sk the soup out of the lacquer cup, which is a bad
r of heat, and does not burn the lips. In some
a clam shell neatly rivetted on a slip of bamboo is
ing spoon.

no such thing as a Japanese chair, or stool, or bed-
A good deal of art is bestowed on short-legged tables
ing or for writing. The inkstone, and pen-rest,
for papers, are articles of luxury. I never saw one
out of Japan, but I saw a great many there, of
ome were inlaid with gold plates. The foundation
and lacquer.

ainio's luncheon equipage is another article which
ommonly offered for sale. It consists of a lacquered
trays and shelves, and a place for the *sake* bottle,
porcelain. *Sake* is heated in boiling water, and
on small porcelain cups. I have never seen one of
xes out of Japan. The ornamental box goes into a
se, and the whole is slung on a pole. The fashion
o to a hill, or a fall, or to some other pretty country
t, and drink, and smoke there, and write verses.
ainio had his painter, and his retinue and the re-
ornamented the equipage. The *norimon* in parti-
s a grand conveyance, in which the great men were

er is a substance extracted from a tree. It grows in
of Japan, and the gum is prepared and sent to all
the country. It is a rank poison while soft. Many
unnot endure the smell, or pass a workshop without

A great deal of skill is required in making the
len and set. When set it is waterproof and perfectly

harmless; it stands heat, and is tough and hard. I got an English box lacquered inside and out, and it has stood rough work right well. Wood, metal, leather, paper, and fabrics take lacquer easily.

Arms and armour were the chief ornaments on which art was lavished. Fancy prices were paid for sword blades. Marks of famous makers were prized and paid for. The hilts were adorned with gold, and the iron mountings were inlaid with all the metals and amalgams known to the armourers. Some of the best samples of Japanese art that I saw were on arms and armour.

Wood-carving is excellent; I have seen few samples out of Japan. The best are about temples of course, but every good house has something carved in wood as decoration. One common ornament is a plank of hard wood placed above the sliding paper walls of a room, and cut through, so that light makes a picture from within, and darkness from without. It is either a picture in white on a shadow ground, or a picture in black lines on the brown wood. Fuji San and clouds, a water-fall and foliage, or a stormy sea and hills, are common subjects. I never found one of these for sale. They are in fact part of the house.

Small carvings in horn, bone, wood, and ivory, peach-stones and cherry-stones show the skill and taste of the artists. I gathered a small collection of buttons which are passed through the waist cloth, and support the pipe and purse, and baccy bag, which dangle from the waist of every Jap like the chatelaine of a modern lady or ancient housekeeper. Many of these buttons are real works of art, expressing a wealth of imagination and thought: e.g. on the base of a stag's

horn is carved a death's head, with a lotus growing out of the jaws. It is the Buddhist emblem of *Resurgam*.

I never saw a bronze vase in a house. The shops at Yokohama are full of them, but they are modern. The handles do not lift the vase, but hang on pegs of bronze. All the bronzes that I saw in use were about temples and shrines. They have a peculiar style, and their handles belong to them. They are in sets, and are used in ceremonies. One is for holding flowers, another for burning joss sticks, a third for a light. A great many small altar bronzes of this pattern were exposed for sale, probably because Buddhism is out of fashion. I bought those which I could carry, and which struck my fancy. The modern bronzes are good works of art, and Japanese, but modern inventions.

Great numbers of large china vases are made and sold in the treaty ports. I do not remember to have seen one used in the country.

No ornaments are worn by men or women. The only bit of gold work fit for an ornament that I saw was a pen-rest in the shape of a sprig of May flower, with coral knobs stuck on the gold. The women all wear a single comb, and a few hair-pins, with coral heads. One class wear a whole sheaf of tortoise-shell pins sticking out like the rays of the sun on a signboard. The Japanese sun is a woman.

No Japanese jewellery came under my notice; I believe that none ever has been worn. They have taken to making ornaments of rock crystal for the foreign market. The artists who made my gold pen-rest, and who model bronzes, and inlay metals, are capable of making beautiful work.

The pictures are peculiar. The most of them are long rolls,

which hang from the top of the room in the sacred corner. The artists seem to have sketched, with a very free hand, anything that they happened to think of. Fuji San represented by half a dozen strokes of the brush, a cloud expressed by certain conventional curves, a dragon indicated by a few serpentine touches, beginning in a cloud and ending in a flourish; such are the common subjects of house-pictures. These are commonly stamped with the artist's seal, and signed and dated. They are carefully and skilfully mounted, and the roller is often tipped with ivory. The roll goes into a neat box, and there it remains till the time for showing pictures comes round. Others are long rolls, which cannot be exhibited on the walls. They must be shown on the floor. Some represent birds, which are very well drawn. I got a falcon series at Kanò, which is a work of art by an expert in falconry. I was shown many roll-pictures, some of great age, but they did not tempt me. Instead of pictures, quotations from poets and other inscriptions are commonly made into rolls for ornamenting rooms. Some caricatures have quotations written under or beside them. The best pictures that I saw were pasted on the sliding doors of good tea-houses.

Temple decorations, and decorations for small shrines, vary chiefly in size and excellence and age. Their style is the same.

In all the decorative art of Japan that I saw, that which struck me most was the firm touch and accuracy of the work, and the sense of fun and life and expression that pervades it all. The fun is the expression of the genius of the people. The life and expression prove their artistic skill. They are always laughing — always saying, "so and so, so and so, make one. The

accuracy of hand probably results from the difficulty of writing. From childhood everybody is taught to use the brush in making their complicated characters. There must be no mistake. Every touch, and dot, and tail, and flourish in a Chinese character has a meaning. Every letter is a kind of picture, so children draw accurately, and men go on drawing all their lives. So when some artist contrives to imitate a bird, or a leaf, or a flower, he can go on repeating his design as often as he pleases, touch for touch. It is but another kind of writing. The habit extends to all other sorts of design. Those who paint plates, those who carve wood, those who model for castings, those who work in metals, all are taught to make their hands express their thoughts by complicated forms, and so they express them artistically, even with needles and thread. The first Japanese picture in oils was painted while I was in the country. If these artists will only keep to their own inventions, they may start a new and excellent school of art in any age.

Whether any foreign influence is to be traced in ancient Japanese art or not is a question which needs more knowledge than I have acquired. About Nikko there certainly are samples of European art. The Greek key ornament appears on many Japanese bronzes; many of the older shapes are related to Etruscan forms, but they are more nearly related to Chinese art. Where a whole people take up and adopt a new idea in a few years, a single foreign object might influence national art in any age.

Nowadays, foreign influence is at work in strange ways. An old cracked German plate was brought to me as a very precious antique, worth large moneys. A very elaborate

bit of inlaid work is shaped on the lines of a wash-hand basin of truly British ugliness. A glittering pattern in a dark shop caught my eye at Shimonoshua. I went in, and found the name of a firm of clothworkers worked into the end of a roll of cloth in threads of gold. Soon after I saw a coolie with this same kind of border worn as the chief ornament of his herald's tabard coat. I asked and learned that the decoration had become fashionable, and that Messrs. Heddles, Tredlles, and Co., had manufactured cloths with their distinguished names worked in gold at the end for the Japanese market, and had made much profit by their 'cuteness. Those who adopt anything foreign now may have acquired some of their art from abroad of old. But here in Japanese art is one more clue to the common origin of people who live at the opposite ends of the old world. There certainly is something like an Etruscan element in some Japanese art, however it got there.

The Japanese have an eye for colour as well as form. Their paintings on porcelain prove it; their damask silks are beautiful, and their embroidery is better than Chinese in all that relates to harmony of colour. So I thought at Kano after a long day's shopping, and a good deal of wandering and watching objects of art.

Thursday, Jan. 7th.—31° inside and out. The merchants came, but I was in a hurry and would not wait to chaffer. Bill for two men for two days, 3s. With three jinrikishas, and two men to each, drove seventeen miles and a half at the rate of four miles and a half per hour, including stoppages to eat and to sleep at the cost of a little more than a yen. The route was from the station to the 700 feet to *Goda Kure*

ferry. First stage on wheels, second on foot. Leaving the plains we passed through a cross range of waterworn snowy hills with high hills to the north. Halted at a village where it was not easy to get housed and fed. On the way passed an Aryan of some breed or other, but did not see him till he was too far for speech. A cold snell wind. A day of travelling without much to note. The quaintest part of the proceeding was to sit and feed and converse with my team of human ponies about a fire of sticks in a tea-house porch, and realize that the camp-fire is the first step to house-building. The carriages were as usual very well made, very light and easy. I doubt if a London builder could have made much better work. The body was lacquered, and the black varnish covered with pictures of crows in gold. They were very well drawn. Japs never design anything like the rest of the world. In other countries designers are apt to compose evenly, with something in the middle, and two somethings at each side to balance. Here five or six crows were scattered all over the carriages, so as to avoid uniformity; a crow was on the corner, half on the back, half on the side. The same habit of mind appears on tea-trays, and in houses; in temples, and in the chests of drawers which are made for exportation. The Japanese artist cannot abide uniformity, but somehow his design is always pleasing.

Friday, 8th.—*Emdsu*, 30·200. 42° inside, 33° in the garden; ground frozen, snow and icicles. I have passed a lot of soldiers in uniform, walking on the national clogs, on their return from the wars. They stop at the tea-houses, wash their feet at the door in hot water, and walk in quietly, like gentlemen. Last night a lot of drunken travellers wanted to

fight "with hands." The old woman of the house turned them out, and I knew nothing about it till my squire told me. The bill was 2s. 6d. My room was small as a tent, neat as a bandbox, with polished stained woodwork, and pierced pictures, and bamboo screens covered with paper. These made my walls and a partition between my layer and my squire's. One of the jinrikisha men offered venison, so we bought a shoulder for the larder. A German plate was produced as the best crockery. Yesterday a pewter kettle much battered was offered for sale as a great curiosity. Started at eight, and got to *Maiboro*. At 11.30, 30-500 on the shore of *Biwa-ko*, the lake Biwa, the largest in Japan. The road was a quagmire with stones in it; crowded with gangs of men, women, and children, cows and buffaloes, all carrying and hauling firewood or merchandize in back loads, or on poles, or on long cars with solid plank wheels. The loads moved by man power were enormous. The country was a maze of wooded ravines all of one pattern, each with a stream and paddy fields well cultivated and thickly peopled. An English Marine officer is quartered hereabouts. I had a letter to him, but the roads were in such a mess that I housed my goods and went out for a walk, instead of driving seven miles. I walked along the street and looked over the lake. This end is a bog with reeds and rice in it, and with a muddy creek full of large boats of queer rig and build. Mountains covered with snow surround the lake. The hills come down to the bog, and are made of stratified rocks greatly contorted, and very hard. The camellias are large trees, some in flower, all budding. Evergreen oaks and grand straight pines and various beautiful ferns, and many other plants which are





all worn to the same **A** pattern. There is not a sign of glaciation from here to Tokio.

Saturday, 9th.—Maiboro. Last night sketched my room, with mine host and his daughter looking at my pictures. Lots of travellers came in late, and got shampooed. The drums and bells of a temple sounded, and generally my lodging was noisy. A litter of impudent puppies lived under the floor and made sallies into the muddy garden. It rained in the night, and poured in the morning. A pretty little girl in pattens carried part of my luggage to the steamer under an umbrella. 46° inside, 43° outside—30-100. The steamer, advertised for eight, started at 9.30. We made thirty-seven miles and a half, and got in before four. The mist hid the shores all day, but now and then it lifted to show villages, and towns at the side of the lake, at the foot of tall ranges of hills. Lake Biwa is said to be very beautiful. We passed some islands shaped like the hills and terraced, as if the lake level had fallen. The steamer was manned, engineered, and commanded by Japanese. I believe they made it themselves. The cabin was divided by a low rail. The first class sat on the floor about a shibashi; the second class, who were numerous, sat on the other side of the low rail, and we all smoked. One of the first class was a little Samurai official in the orthodox loose trousers of his genteel class, but with the modern fashionable mass of stiff black cropped hair, instead of the usual shaven crown, with short shiny pigtail folded up on top. My squire fraternised with the gentleman, till he went to sleep rocked by the billows. It was nearly dead calm but the soldier was unwell. *Ot* is a large town with wharves and steamers about them, and with paved streets and much

mud. Our passengers donned their broad straw hats, shouldered their packages, and vanished into the streets. I followed a coolie and my box to a tea-house, and camped magnificently under the wall of a temple. Presently service began. *Mara, mara, mara, mara, oi, oi, oi; mara, mara, mara; DRUM*, and then all manner of chanting and strange noises. Then in came mine host, so I stopped writing and held a palaver with the family.

Sunday, 10th.—Stopped and rested and dawdled, drew and smoked, and wrote home. Walked to a famous temple with my host, who is very civil to foreigners and anxious to learn their ways. The famous view was invisible for mist; so after looking at the temple and the town from a grand terrace, where “no” dances are performed on festivals, we wandered down and shopped. In fine weather this lake must be beautiful. Ot is a military station, and being near Kioto, on the main route, is a very busy, interesting place. If I had seen it a couple of months sooner I should have enjoyed it more. You who write journals be warned and write while things are new. All that I had to say about Ot went into a letter, which started by the usual post, and got safe home. My log is meagre. Bought some photographs of *Midera*, the famous temple of *Kangwon*, at Ot, which we went to see. A very few years will change all this country. The traffic now is enormous on the roads, converging on the steamer. Surveyors are out, selecting a route for a railway. I am fortunate in having seen Japan even as it now is, rapidly transforming itself with all the readiness of the native badger and the rest of the *Kami*, who are changing
 my gods . . . surveyors . . . fellow traveller tells me

that he got within sight of this lake travelling from Kobe. He was charmed. One night he took a fancy for milk in his tea. The interpreter reported that the people were very sorry. They had no milk, but they had some hog's lard. Anything in tea is unknown, therefore anything might please the foreigner, and hog's lard, being foreign and unclean, might do as well as milk. I never heard of milk, butter, or cheese, away from settlements.

Sunday, January 10, 1875.—Ot. The priests are at their evening prayers. At intervals they shout, "Buddha! Buddha! Yah! YAH! YAH!" And there is a gush of water. Massanao explains that they are dashing cold water over themselves, being naked, and that they do it for thirty days while it is hard frost. The ceremony began three days ago. In Tokio they used to run two miles out and in, and dash cold water over themselves. But now, as people must wear clothes in the capital, they cannot do it. *Benten* is a snake-lady; I have got an image of her. *Mioken* is another snake. A man became a woman, and the snake Mioken became a man, and came to the lady's room. What a wealth of stories Japanese mythology contains. My boy cannot speak English enough to explain it all, and no European that I know can. There go the priests again with a drum and a pail of water. They have been at it for an hour, "*Thu! AI! THA!*" Theirs is the so called "New Religion," which is a mixture of Shinto and Buddhism."

No. XXXII.

Sunday, January 10, 1875.

OT, LAKE BIWAKO, JAPAN.

MY DEAR MOTHER,

I have been twenty-eight days on the road from Tokio to Kioto which I mean to reach to-morrow. After that I have easy travelling to Kobi where I take ship again for China.

I am writing in my Archangel skin dress, with my feet wrapped in the hide of a Japanese goat, by the light of a candle stuck in a *sake* bottle. My room is made chiefly of paper screens, and the floor is made of mats, on which I have just dined. On the other side of a wall is a temple, and there service is going on. The priests have been jabbering for an hour. Now they are striking a grand bell; a while ago they were beating a drum. At short intervals they call vehemently on *Buddah*, BUDDAH—YAH! and then a gush of water means that they are dashing pailfuls over their naked bodies, because this is the season of frost. It is so wild and strange to sit here in the middle of Japan and listen to all these strange sounds, while a quiet civil Japanese is crouched beside me watching my pen. He has been with me to a temple where there is a grand view over the lake famed in all Japan, and we have been to curio shops and strange places. We cannot talk, but by the help of my interpreter we have grown friends.

I cannot tell how I enjoy this strange, wild life. Thanks to Sir Harry Parkes, I got leave to travel by the Nakasendo (middle mountain road) where few globe trotters or Europeans
 1875 6 000 feet high

to snow and hard frost. (Here comes my landlady and her children and a grown son, and there they all are looking at my picture-book.) I do not mind cold, and thanks to my exchange dress I slept sound in a temperature of 29° inside my paper room. But when I set out I did not reckon on walking 200 miles on snow and ice, with occasional days of mud when the sun shone and I got low. I started with a lame foot, but by dint of walking my soles are as hard as leather, and I am in glorious good condition again. I have not felt so well for years. I weighed but 238 pounds a while ago, now I weigh 192. I carried no food of any kind, and I had no fork or spoon. I have seen no bread for six weeks, and I have learned to eat with chopsticks like a native. Japanese food is not bad; I get rice everywhere, shell-fish, eggs, and vegetables of many sorts, oranges and persimmons and cakes made of beans, and many other curious viands. When I find pheasant in a shop I buy it, when I find venison and mountain goat I buy a joint, and my boy makes soup and roasts steaks, and fries potatoes, and then I feast. Tea I drink all day long without sugar. When it is cold, and when I am in the humour, I put *sake* and orange-peel into my cup; *sake* is a wine made from rice, which I find excellent and comforting. The Marchioness made believe in like manner, and was as happy with Dick Swiveller. The natives get drunk on *sake*; I do not, for I could drink a quart I believe. That being my fare. (Here comes an old man with cakes to sell;—I have treated the family all round.) My habits have been to walk fourteen to sixteen miles a day, and stop a day or two when I found anything worth stopping for. I stopped at the foot of Asamayama, a volcano,

and I did not go up because it was deeply covered with snow, and I am fifty-three. I stopped at Shimonoshua, where are hot springs. Opposite to my door I saw more naked people than ever I saw in the same time. A great steaming pool under a shed in the street was full all day, and most of the night. Men, women, and children of all sexes and sizes, ran in and out and splashed and played there, as if it were summer and dry. Sometimes a couple of them, stark naked, toddled off down the street under a paper umbrella to keep off the cold sleet which was falling fast. What they are all made of I cannot fancy. I was too cold-fingered to draw much, but I have made some sketches. My chief amusement has been buying curios. I have got a set of knife-handles, and no end of lacquer ware. To-day I bought five large plates for three shillings, and one very fine dish for four. "Fine old niddy" will be a fact when they get home—if ever. (Pause to smoke). I can buy suits of armour for a couple of dollars, and swords by the dozen for about a pound, the best. But I don't want armour, and I don't know who does. The temptation to buy is not to be resisted. I have got a golden pen-rest. I had nearly got two blue satin dresses embroidered in silk. One was all over brown lobsters, the other had two old figures sweeping and raking leaves on the train. Both were real works of art. These and a picture about ten yards long with beautiful miniature pictures of a play at court; about a hundred figures at least, were nearly mine, but we haggled till I got obstinate and I left them. I have been sorry for it ever since. I find these things in towns where Daimios used to have castles. They have been abolished, and their brasses have been sold for nothing. I was offered a couple of red

crystal balls, as big as oranges, but 10*l*. and 12*l*. was too much for my travelling purse, and I don't know the British value of rock crystal. Of this I am sure, the Regalia ball is not finer than these were, and I believe that I ought to have haggled for them, which I'did not. The mountain country is really beautiful. The hills are steep and furrowed with ravines. In these grow pines, bamboo, cryptomeria, camellias in flower and budding amongst the snow, and shrubs without end, of which I recognize a few. The high tops were covered with yellow bamboo grass. There deer and mountain goats abound. In the low grounds pheasants are numerous. A very good Frenchman Paul Carrey who crossed the Pacific with me was my comrade part of the way. He carried a gun. One day we stopped to let him shoot, he brought home five pheasants and saw about 100. But the men who went with him, as soon as they saw him kill flying, did all they knew to frighten the birds, and drive them off their preserves. At last they led Carrey to the high road and brought him home. He has gone to Yokohama again by a round-about mountain road. If he turns up in London, be kind to him, he speaks good English, and is related to the great Laplace. As for the people they seem to be the most polite, civil, good-humoured, well-washed, clean critturs I ever fell in with. I have not seen one hurt a creature. I have not heard a cross word spoken since I came to Japan. I hardly hear a child cry. They are laughing and giggling all about this house now, and they have been laughing ever since I came among them. They are continually twangling guitars and singing execrably. They work like horses. Men haul enormous loads on carts where the roads are fit for

wheels; men women and children carry loads that would astonish a porter. When the roads are fit for carriages, I get into a go-cart and put on a leader because I am heavy. My luggage goes in a second jinrikisha, and my boy in a third, and off we go at eight miles an hour for twenty miles with an occasional halt to drink tea. Then men and "horses" get round a fire made in a square hole in the ground, sit on mats, smoke, drink tea, and jabber. Then we go off again laughing, shouting, and running as if hauling me were play. The pay is about a penny a man a mile. My day's expenses are about eight shillings. Yesterday I came 36 miles over this lake in a steamer, in mist and rain, and was bored. To day I stopped to rest and amuse myself and very well amused I have been. And now it is time to put on my Archangel night gown and roll in my plaid, and sleep as well as I can, for the noise of priests and cats, and bells and drums, and the giggling of my landlady, who is next door serving supper to some travellers. She has blackened teeth and shaven eyebrows like all respectable married women in this curious land, and she is perfectly hideous like most of them. I have bought some photographs of noted beauties. I think them generally like Lapps and Samoyedes with curious long turned up eyes and broad noses. My landlord who has been watching my pen and wrapping up my feet all night has just lighted a new candle. I have burned a whole one to this letter. So good night—Saianara.

J. F. C.

Monday, 11th.—41° inside, 39° outside. My rooms are very dark. The servants prepared me a chimney and their retainers.

word-rests have places for seventeen swords, and grand
and gold crests. That seems to mean a retinue of
four swells. Went out shopping, and walked over an
able, muddy, crowded road, seven and a half miles to

My landlord hauled my goods in a jinrikisha. On
d met two Aryans, and realized the difference of races.
not seen an Aryan face since I parted from the French-
nd I was struck with the white skin and yellow beard
of the people of Indra. I got the news. A lot of Aryan
are employed hereabouts. I took quarters in a very
house near a bridge on the Tokaido road; made up
ounts, ate some tiffin, and wandered in the streets till
even miles and a half in all. This town is built at
gles, and very well built. Everybody is well-dressed.
men wear swords. A fair is going on. All the people
stare at me when I stop to look at a shop, or at a
or at a show. I am a rare creature in Kioto, the first
er that ever lodged in this house. Wrote letters. Not
o there was an exhibition on the British model at
and then a lot of foreigners appeared. As soon as
w ended, the place was closed to foreigners without
t. One thought has bred many exhibitions.

lay, Jan. 12, 1875.—44° inside. Sunny and fine.
out shopping. Walked up the hill to the east, 700
The view over Kioto from *Shogun's ga*, where the Sho-
ere buried long ago, is very curious. The town is on
river flat. All the houses are of one height; all their
f one dark brown colour. The brown landscape is
with numberless white gables diminishing with the
e, all gleaming with the evening sun. On three sides

the plain is bounded by mountains from one to 2,000 feet high. On the third, south-west, side the river *Kamagawa* shines in the hazy air. Only a few large buildings on the outskirts of the town show above the level; the only visible smoke is from a china factory. Theatre drums, bells and gongs from temples on the hill-side, the cawing of crows, the screaming of kites, and a babble of Japanese voices came up from below, and the wind sighed and rustled amongst the bamboo grass and the pines on the hill-side. I thought of Florence and of Moscow as I saw them in 1873, and could think of nothing quite like this strange view of Kioto. It is most like Florence devoid of architecture. The temple which I passed on the way up is very fine. I doffed my shoes and went in. A gleam of sun lit up a kneeling congregation of men, women, and children, and the shaven heads of three or four priests who knelt in the first row. Behind a reading-desk an old priest in robes, with a gilt fan in his hand, was preaching a sermon in the curious falsetto which actors use on the stage. Presently he finished, and retired to an altar with gilded pillars, and lacquer and gear which shone in the dark back-ground. The priests began to beat a drum—tum : tum ; tum ; tum ; tum ; and all the congregation chanted No : no ; no ; no ; for five minutes, while the preacher knelt and bowed towards the altar exactly like a Catholic priest. His bows were lower, that was the chief difference in the ceremony. Then he came back to his desk, unfolded a silken cover, opened a book, and began a second sermon. I could not understand, so I went up the hill to the biggest bell in Japan. It is nine feet four inches in diameter, eleven inches high, and weighs one thousand two hundred and thirty pounds. The outside is

ornamented with strange devices, the inside rough from the mould. It was cast in the fifteenth year of Kengi. The roar of it was magnificent at night. On coming down went through a tea-field to another temple, with a grand wooden pagoda of carved beams, and then at sunset came back to my beautifully clean hotel. A merchant of Osaka has sent for a singing girl, and there she is next door twangling a koto. My old merchant woman came with knives; I bought a lot.

Wednesday, 13th.—My old woman with pictures came, and charged me three sius for painting and mending. Gave her the odd siu, threepence, which she could not at first comprehend. Such generosity was unheard of.

THE PICTURE.—This is a stamped picture, therefore by a good artist, manifestly very old. Figure on horseback, dressed in gold-mounted chain-armour, with a white horsehair plume to his helmet, two swords, one of the long curved pattern, which is shown at the temples, on his left side. In his right hand is a baton of command, used in war, with sixty strips of gilt paper. "When battle begins, hold up; when go back, hold back; when go to right, hold to the right; show soldiers, called *Saihai*." Bear-skin shoes, stirrups of iron inlaid, of the pattern commonly sold in the curio shops. Gilded leather saddle, silk housings, tiger skin hangings, all the horse gear is of the pattern still to be seen occasionally; silken robes. "Anybody knows that is a picture of Takida Shingen, same as Tycoon, governor of the middle district of Japan. He lived at Kofix, about 400 years ago, say 1450. Bought at Hosochte, on the Nakasendo, and mounted at Kioto." I saw few pictures of the class, so I note the costume.

ROLL PICTURE.—Bought at Kanò, chiefly to roll up the old

one in ; represents kitchen work, a man with rice ; stamped ; signed *Shosai*.

The knife handles have a story, and they are curious works of Japanese art. The knives are worn in the sheaths of swords and are meant for cutting paper, as I am told. They were sharp enough to cut throats. A black one is a concert. A mill is the Yodo Castle water supply from Ugikawa, near Kioto. The moon and a kiri tree. A devil, "Niwo," is a Buddhist giant who guards temple doors. A lot of flies means Summer and Autumn. *Hoku Roku Gin* is a long-headed man who remembered Buddha's sermons. Gold cap, Kuno Kami, one of the 7, between Shinto and Buddha, means fortune. A dragon, gold, "Amario." A lion and a toko, a thing held in the hand when praying to Buddha. Nine stars and karaktha grass. A cock on a drum. Horse tied to a cherry-tree. A lobster and sundries mean the January house decorations. A river fish and a waterfall mean high rank, aspirations, ambition. A centipede, water, and a post. Where the river runs out at Biwako, are two bridges, the post means the rail. Between them a small hill. "That worm be there, seven times as long as round the hill. Jawarra Toda ni de Sato. Shot him with a bow and arrow, but the arrow did not go in. He put spit on the point of the arrow, and then shoot him and kill him. He stood on the bridge."

A long-tailed tortoise and a tree, used at weddings. A priest and poet looking at Fuji San. "*Saingo Nash*. He travelled Japan, and made verses, and looked at views everywhere." "Hoto tonge," a bird that sings in the sky, but cannot see it, says cuckoo. I had twenty eight different designs on duplicates thirty or more copies and

rejoiced in my collection. A bronze temple vessel stamped *Sieming*, by a very old maker, who lived about 1600. After packing went out walking, and walked five miles to the castle, which is a curious walled inclosure, with a white pagoda, and green trees looking over the white wall. Nine years ago the upper wall was riddled with shot, during a fight between the troops of the Mikado and Shogun. Now the mud wall which rises above a wall of stone, built Cyclopean fashion as usual, is whitewashed, and mended. The revolution is ancient history already. Went next to the Mikado's palace, of which part is a court-house. There saw a prisoner tied with ropes, being led off to jail or punishment. There is nothing striking about this building except the usual Japanese gates. There was no striking of the prisoner, but somehow he reminded me of an old cock that was brought to me bound in like fashion for execution. I thought of the carpenter play, and the talk about torture, and thought the guards grim. My old woman came at night with more bronzes, which tempted me to buy. Much music and singing, and laughing till a late hour.

Thursday, 14th.—44° inside, cold, sharp, wind outside, fresh snow on the hill tops. Walked nine miles about the town, shopping, and looking at temples. These were so dark inside, that I could not see their magnificence. The likeness to Catholic altars struck me once more. In one a grand ceremony, the shaving of a priest's head, was going on. The place was crowded. The women sat on the floor furthest in, each with a long feather of white paper stuck in her black hair. The men, with some few women amongst them, crouched together outside, and looked over each other from behind pillars. I looked over them all, and admired the

strange scene which faded into darkness, and glimmering lights, and flashing gold, and lacquer tables, and altars, and silk vestments. Walked next to the opposite north-west corner of the town, where is a temple dedicated to a Shinto Kami who is fond of buds and flowers, and boys and girls. It is a very pretty place, and the wood-carvings are as usual beautiful. A lot of boys were running a hundred times round; they carried a bundle of sticks in their hands, and dropped one at each turn. On a building by the temple were pictures and samples of good writing by scholars of the school. A lot of men were busy transplanting a tree. The roots with a large ball of earth, were carefully roped up, and the whole operation was well done. In fact the Japanese are skilled gardeners. In a neighbouring street found a building marked in English, "Office for the Promotion of the Labour of Women." Two girls stood near in grand attire, well painted. They were scholars, and this is one of many schools for girls.

Lunched on duck stew and eel soup at a tea-house near the castle; bill for two, including *sake*, a boo and a half, 1s. 6d. Bought no end of curios in out-of-the-way shops, where the prices were very low. When I got home, packed all my gear in a big packing-case, intended for England. A quiet evening, for my noisy neighbour is gone. He was a sick officer who drank *sake* and amused himself with music.

Friday 15th.—44°. Walked five miles to Shimi, and took carriage at last to catch the steamer at noon. Visited dailboats, a gigantic bronze head of Buddha, admired monkeys, and red faces and whiskers and played wonderful feats.

seemed merry and wise, like Japanese. Looked at people making figures in clay all along the road. Hired a boat as the steamer had gone at 11, and got to Osāka at 10 P.M. Lots of curious scenes by moonlight. Bridges, lights, boats, bells. Got to the French hotel.

Saturday 16th.—45°. The mail in on Friday night, so I picked up my mind to another week, and went shopping and wandering. Got to the mint at last, and called on Major Underwood. The town is on the delta of a large river, with canals in all directions. Walked nine miles.

Sunday, 17th.—44°. Rain, 31·000. Wandered the streets all day, looking for curios. Got to a Shinto temple at last, a very curious place, with lots of people saying prayers. First they rang the bell, then they clapped their hands twice, then they rubbed their palms together and muttered, then they threw cash into a box, and went to the next shrine. This one was dedicated to Inari Sama, with foxes in wood and stone, and arcades of red Torii. I don't know whether these arcades were meant to suggest a fox's earth, but they did suggest that idea. The priests in a neighbouring temple were chanting vespers, and singing rather well for Japan. Bells and drums and hand-clapping were going on in all directions. The view over the city was strange and foreign. Dined at the French hotel with some sea-captains, who spoke English, low German, and Norse. The French landlord introduced a missionary who never spoke "*Bêtise—la Religion*" in his time. A Pacific mail steamer was burned near Hong Kong; Chinese passengers lost. That is the chief news. Sent my desk to be lacquered and my plaid to be embroidered in the name of Japan. A queer day.

Monday, 18th.—49°, bright, cold. Went to Kobe by rail, and returned. Took ticket for Sunday morning. Forty cubic feet equal to one ton. Freight to London 98s. The steamer *Japan*, burnt 17th December, lost mails, 400,000 dollars treasure, and 200 Chinamen. I am not sure, but I think this was the steamer on which I had nearly embarked at Yokohama. If not, it was the preceding steamer in which I thought of starting. The country is a shelving plain, ending suddenly at water-worn hills. In cuttings, the ground seems to be made of stratified sands and large rolled stones. Some terraces on the hill-sides have tombs on them, and seem to indicate recent elevation. Several earthquakes have been recorded. I felt one at Kioto. The house shook, and the shutters rattled for a considerable time, as if a heavy waggon was passing over pavement. I felt none of the recorded sensations, and no one seemed to be disturbed. I felt another shock of the same kind at Tokio. These prove that Japan, for a distance of more than 300 miles, is now moving. The sea rose and flooded Kobe not long ago.

Tuesday, 19th.—Walked to the Mint, looked at it, and went Curio hunting, after tiffin with the major. Bought sword-hilts in the street, near the castle. That is a structure like the Yedo castle—a moat, a cyclopean wall, gates, pagodas at the corners, great stones near the gates. A camp fire with a covering becomes a tent; that grows to be a house. A house with a ditch grows to be a castle; that becomes a walled town. Paris was a walled town, and the Reds tried to get back to the original walled fire without a roof. The same bright idea prevails at Chicago and possibly at Virginia. Got my laid embroidery done in many a

mp, and got home at dark. It has struck me many a time that man-power carriages are a mistake. The manager of the Mint wanted engines to weigh his coins, and got one from England. He wanted more made, and he found artists able to make them, who were acting the part of cab-horses in Osaka till he found them out. Now these coin-weighing engines rank high in England as skilled work and ingenious devices. It seems like cutting sticks with a razor to turn watchmakers into ponies. But men, like ponies, must eat to live, and the revolution turned everything heels over head, as usual.

Wednesday, 20th.—Packed and went to Kobe by rail. Took quarters at Mrs. Green's Hotel. What a pretty creature is a pretty Aryan woman amidst Turanians!

Thursday, 21st.—Passed goods at Custom-house. Called on the Consul. Walked about curio hunting.

Friday, 22nd.—Walked about curio hunting. Dined with the Consul. Sang and danced.

Saturday, 23rd.—Walked about. Looked at a Shinto temple, and fed the sacred Albino pony with peas. Shipped goods and self at dark on board *Costa Rica*.

Sunday 24th.—Sailed at three. All day in the Inland Sea, among islands and junks. Very fine and cold. The hills all water worn, and of one form. Very pretty. No raised sea margin to be seen anywhere, so the land has not risen of late. Passed a large walled town and many temples. Very few people on board.

Monday, 25th.—Passed out of the Inland Sea about 4 A.M. ran through islands, and into Nagasaki at dark. Strong breeze northerly. Snow and hail, cold and chilly. It's all

very well steaming about the world, but walking is better fun.

Tuesday, 26th.—Landed and hunted curios. Sailed at 5.10 P.M. Cold, chilly, misty; fresh snow on all the hills. The sights of the place are the old Dutch settlement; the island where the missionaries were run off the cliff; and the scenery, which is beautiful. I had just got so far when a French traveller announces that we are returning to Nagasaki. Fog.

Wednesday, 27th.—Got under way about 4, and ran out again. Cold, damp, disagreeable weather, with snow showers. Passing to the south of islands with tall hills: part of Japan. About noon; passed to the northward of small islands with stacks, called the Asses' Ears.

Thursday, 28th.—Fine smooth sea. The water of the Yellow Sea is dirty with the mud of the Yangtse Kiang; a hundred miles off shore. Made up temperatures and posted them for a friend at Tokio.

Friday, 29th.—Heavy storm in the night off shore. Got to the lights at dawn. At noon got to the lightship and waited for the tide on the bar. The water of this great river is 40° and as dirty as the Mississippi; a yellow brown. The air is 31° at 8, and the writer freezing on deck. This is Lat. $31^{\circ} 12' N$. Took on board Chinese pilot and captain of the lightship. Coast not to be seen on either hand. On this voyage the range of water temperatures is from 63° to $40^{\circ} = 23$ degrees colder here than off Japan in the hot season of the Pacific. The Chinese coast climate is said to be excessive. Hot in summer, over 100° . Cold in winter, under 30° about the latitude of Nagasaki.

BOOKS.—Before leaving Japan something may be said about the books, which amuse the people, and amused me. It would take a small volume, many interpreters, and much study to do justice to the literature of a whole country which is proud of ancient learning. A traveller cannot do that. I can but notice that which struck me during my wanderings and wonderings. There is no fun in buying a salmon in a shop, but it is grand fun to catch a salmon in a Norwegian river. So it is with curious knowledge; the best part of it is hunting it down under difficulties. The Japanese Asiatic Society have printed a lot of stories since I came away, but nobody has touched popular tales in earnest. That I know from talks with my squire whom I set to collect tales.

THE SHAPE OF A BOOK.—In a drawing, a man's head or a hill-top is placed next to that edge of the paper which is furthest from the artist, and is at the top of the picture when it is hung on a wall.

N.

When I think geographically I have learned to fancy myself looking at a country with my face towards the north star. The geography book used to say, "The top of the map is towards the north, the bottom towards the south; the right-hand side towards the east; the left-hand side towards the west." Japanese geographers put their country on paper, **E.** as it happens best to fit the sheet, and indicate bearings by a compass. They probably learned the use of that instrument from the Chinese. *Kita* is north; *Higashi*, east; *Mianami*, south; *Nishi*, west. These points may be in any corners of the paper, and names may read any way, but, for choice, the top of the map still is towards the north, and the names read downwards. They are usually written within a cartouche.

S.

North

48

MY CIRCULAR NOTES.

For map read "book," and these geographical definitions may serve to explain the order of written characters in Japan. The top of each letter is where the head of a man or the top of a hill would be in a drawing ; north in a map.

West The Japanese book is a long roll written on one side, rolled Ea or folded. It is like the long roll of paper on which marriage contracts were written in Scotland about a couple of hundred years ago. It is something like a ribbon or a web of cloth, with two ends ; which may be rolled from the right hand towards the left, or from the left towards the right, or, with both hands, away from the body, or towards it. The beginning of a Japanese roll of writing is at the right-hand end, and a reader holds the roll in both hands, and rolls it up from east to west, from right to left, as he reads. The beginning of a Scotch roll is at the top, and the reader reads from north southwards, if the bottom of this "map" be towards the south. Give a Japanese roll a quarter turn east to north, begin at the top, and all letters and lines follow each other in the same order as letters and lines do on a Scotch roll of writing. The Chinese characters used in Japan express a syllable, or a name, or a thing. The position of a character is no greater difficulty to a Japanese reader than it is to a compositor. They write and draw upside down or sideways with equal dexterity. The roll held vertically instead of horizontally reads in this fashion, with letters on their sides—

North	1	nik	ko	and	To	kio	and	kio	to	are	in	nip	pon	1	B
	2													2	
	3													3	

The Japanese
of the world

be done by turning the letters one-quarter of a circle right, thus—Nik ko and To kio and Kio to are in Nip the roll held by the edges instead of by the ends will read like an old Scotch marriage settlement.

Japanese bound book is the long roll folded so as to rank sides together, and stitched at the side through the middle. An English legal document written upon many sheets is stitched at the lower edge, and begins at the furthest end from the lowest skin in the package. A reader holds the end of the roll. If the letters were turned one-quarter right, or the roll one-quarter to the right, the Western arrangement would be arranged like the Eastern Japanese roll

ng—	5	4	3	2	1
		t	m	d	T
This Indenture		w	a	e	h
made		e	d	n	i
between		e	e	t	s
&c.		n		u	
&c.		&c.	b	r	i
		&c.	e	e	n

For some reason it pleased Easterns to begin at the right end of their maps, and Westerns to begin at the left or left hand of their books. The inventors of writing probably began to carve pictures and symbols on wood and trees, and stones; at the top, opposite to their feet, and wrote downwards as the Japanese and Chinese do, as all men do naturally when they inscribe their ideas on a wall or on a stone. I suppose that nobody ever saw a inscription which began at the bottom of a wall and upwards. Ogham is an exception.

It is for the learned to discover how men wrote in Central Asia. All the savages and schoolboys that ever I knew began their writings as high as ever they could reach, and came down gradually towards the earth.

TOY-BOOKS.—I bought a lot of toy-books and studied them with my squire. They faithfully depict Japanese life. For example, I find all the steps in the invention of a mill which I noticed in Japan, and one which I did not see. A pair of wheels, made like the usual cart wheels, are joined by boards, so as to make buckets. The lower part of this primitive water-wheel is in water, and a man resting his crossed arms on a cross-bar between two uprights ; or, holding by a pole to steady himself, walks up the wheel so as to raise water in the buckets to a higher level for irrigation or for domestic use. Having got so far, the next step was to get falling water to turn the wheel the other way, and save human labour on this tread-mill. This is characteristic of that Japanese art which seems to turn everything the opposite way at first, and to come right at last. A carpenter pulls his plane towards him, and pulls the teeth of a saw towards him through the wood ; but he is anxious to learn how other carpenters work, and to change his ways for the better if he sees his way to improvement in novelty. So it is in all Japanese arts and engines. They try, and succeed.

In all the big towns of Japan book shops and print shops abound. New prints are continually coming out, and they spread through the country, and convey the spirit of the times. I bought one set of prints in the modern Eurasian style, which was popular in tea-houses along my road. It is a set of prints, and pictures of European and native costume.

ness. It is about the equivalent of Gilray's caricatures. A theatre curtain is drawn back by a man whose legs appear on the stage, and the audience are suffering many absurd calamities. The equivalent of "apples, oranges, ginger beer, porter, ale, cider,"—the man who brings tea, has tumbled. One box full of people are scalded by the kettle; another lot are battered by a shower of scattered luncheon boxes; another lot laugh. There is more expression in that scene than in all the Chinese art that ever I saw. It is vulgar, but very clever. A boat is passing under a bridge; a vendor of umbrellas leans his burden on the rail, and the swells in the boat are speared by falling umbrellas. Gilray did nothing better in the way of broad farce. A party of the youth of the period, in uniform, seated on chairs by a table, have come to grief with a soda-water bottle. A tea girl is dismayed and amazed. It is the old world and the new B. and S. in Japan. A coolie has dropped a pail of something, which has upset a jinrikisha man, on whom his fare is falling. It is a pantomime trick with the butter slide in it, but Japanese of the present day in every line. A red-faced monkey has got loose, and has climbed a telegraph pole, and the picture is full of astonished and dismayed caricatures. Two cats, fighting on a veranda, have upset a dwarf tree, which has fallen on the eyes of a coolie; nurse and babies form a tableau. The picture tells its own story admirably. There is a street fight near a railway station and a confusion of coolies that is wonderful for action and expression. It is grotesque. So the book goes on showing life in the capital, as it now is, with all possible mishaps and misadventures; all are caricatured with extraordinary grotesque power. The strange thing is to find photographic

cameras, carriages, horses, and European clothes jumbled up with the manners and customs and costumes of old Japan. It is all true to nature. Polo is on one page; a native naked bath on another. That is the modern taste. The spirit of Gilray is in Japan, modified by German and French caricature.

Take again a modern Buddhist book of another kind as explained by my squire at Kicto in January 1875. It is "The life of a man." "If anybody do this way he do well." The title page is at the Eastern end of the book, and the first line, to the right of the page, reads from the top downwards. Like everything else in Japan, reading is the reverse of Western reading, and binding is quite as antipodean and original.

Page 1.—A famous wood engraving on paper, which is superexcellent for printing upon, and durable and light. My interpreter read the page of letters and says, "Man reading to the servants," Japanese family prayers or lectures.

No. 2.—"A dutiful son working for parents."

No. 3.—"If high, mountain not useful. If got trees, then useful; so great man without wisdom," &c. A small astonished boy with outspread hands is taking in the wisdom of a grave personage in pattens who is pointing at a landscape.

No. 4.—"Wisdom is better than strength." A corpulent coolie and a genteel wise student, who is surveying strength with an air of contemptuous self-complacency that is inevitable; muscle is at a discount, brains at a premium. But here is the text on which half the popular tales of the East are founded, "Wisdom is better than brute force." The

No. 5.—“A jewel if clean shines; if unclean dull: so man must have science and virtue.” Something like a crystal ball upon a tripod is shining, with straight lines; a shock-headed personage amazed is upon one knee; a solemn upright sagacious sage is pointing the moral in a sitting costume. He is pointing at the jewels of wisdom and virtue, the pearls of great price.

No. 6.—“When young must learn, or old nothing know.” A Japanese boy, holding a Japanese brush, is writing on a book, laid on a Japanese table, seated on the floor of a Japanese room, in front of a solemn shaven Japanese tutor, with a face all over priggish philosophy. It is Japanese all over, and for art it is good as the best block books of early Europe.

No. 7.—“Help parents, if not same as crows.” A crow, admirably drawn, is croaking at an astonished dismayed boy, to whom the sage is showing a great pile of logs and bones. The industrious crow, exceedingly well designed, is flying towards the idle crow, with a twig. It is Hogarth's apprentices. It needs small wisdom to twig the meaning of the page. It means that men must work to live and ought to help those who are past work, and that is a good lesson.

No. 8.—“Young men reverence age as father.” A lot of figures are doing it with admirable expression and action. They are reverencing age Japanically.

No. 9.—“If see do good, go with; if see do bad, go away.” A lantern in a temple, a lecturer pointing over the temple wall; a lad with a small paper lantern looking out sharp; and a lesser lad listening and looking out into the wide wicked world.

[illegible]

4. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Arar and Collins (1971).

idiotic enjoyment and horror expressed in a few artistic lines of face. It is excellent, and very like an old caricature called "Symptoms."

No. 15.—"As wheel turn an axle, so tongue talk good or bad." One of the sort of coolies that I met near Maiboro is hauling a long cart heavily laden, with the usual jointed, ill-made old Japanese wheels of the olden time, turning on the hub of the engine. Boston "hub of the world" could hardly find a better illustration of the value of talk. The world goes round upon wheels in spite of tall talk.

No. 16.—"If charitable, happy, fortunate." The charitable person has been having a quiet smoke, and he is handing a gift to an eager seedy suitor in the attitude of respect for rank, holding out both palms, under his long chin. His fan is beside him, so he ought to be a poor relation or a priest. It seems that rank and riches are respected in Japan, and Mammon is worshipped like the almighty dollar.

No. 17.—"If man dead called good; beast called bad" (Reputation). The beast is a roll picture of a tiger hung in the holy corner. Lecturer and scholar form a tablean, seated on the floor. I presume that the warlike tiger is the defeated soldier class, "no sabe."

No. 18.—"If rich, don't think too much of riches." Thoughtful Dives, all alone, is thinking and smoking, and working at his ledger, with the counting gridiron beside him, and a rich room behind. Thought and self are in every line, and the rich man is all alone with his pipe. That is another short sermon, and not a bad one.

No. 19.—"If poor, don't covet too much." A woman is cooking. A man has got a small cup in his hand, and is

coveting as hard as he can the excellent dinner that is being cooked, and the *sake* in the bottle, and the dinner on the tray. That is not a bad sermon for priests who live on alms: don't be greedy.

No. 20.—“One day, one little lesson; 365 in a year.” A little lad is drawing characters, which look very like foot-prints. The tutor looks over his pupil's shoulder, and looks wise. “Footprints on the sands of time.”

No. 21.—“If teacher walk, step not on shadow; as father treat: walk seven feet away.” The teacher, with his sword on his left side, is taking a walk towards a temple, followed by his shadow. Two respectful Jap imps, with heads shaven into the usual patterns, keep out of the shadow, and out of the reach of the sword. That is not a bad lesson for schoolboys to learn from masters in these later days.

No. 22.—“If drunken, like crazy that will not learn.” Crazy, half naked, is waking terrified at something unknown to this learner, but supposed to be a bogle evolved by crazy from his own inner consciousness.

No. 23.—“*Shien* loved learning; had no oil; put glow-worms in basket, and got rich and learned.” There he is, in a dilapidated dwelling, reading below a bag of glow-worms. But, this being a story unknown to me, the picture needs the interpretation.

No. 24.—“*Kikan* was third; always read.” The third in his examination is an old fellow with a long beard, leaning on a hoe, near a stack of rice, in a rice-field. I never heard more about him, but manifestly he was a famous scholar, for he is reading instead of minding his business. It was to till the earth, and to be good that he made

rent out of his brains, and earned many kokos of rice by writing notes.

No. 25.—“*Hakua*, when five years old, made a poem ; nine years old teacher.” Such is the march of Japanese intellect and its reward. There sits the intelligent young poet on a Chinese stool, with a lamp and shade sliding on a pole, reading. Inkstone and brushes are on a table with crooked legs ; and a distant view of a stormy sea is behind him. I know nothing about this prizeman ; but my boy knew him, and everybody knows him out in Japan. All these mean that learning is honoured and is rewarded. Hence competitive examinations, mandarin’s squeeze, and failure.

No. 26.—“*Shimisen* was first mountain.” Here my squire would not go on, and said, “Now, no good ; don’t believe.” That was exactly what I wanted to know, and as usual could not find out. It is a legend. A lot of houses and trees are on the flat surface of a mountain, shaped like a sun-dial, with stalk and steps. The sun and the moon are behind it, and the sea below it. I suppose that it means some history of creation, and that it may be derived from some real mountain, which was, or is, a sacred high place, whose geography is unknown to me. I found a sacred inaccessible rock in Ceylon afterwards, with a dagoba on the top of an overhanging cliff. I have often seen this book mountain carved and depicted. I had learned the name of it. *Shimisen* was the sound of it, and it seems to be east of the sun and west of the moon by the picture, somewhere unknown. My next journey ought to be much in search of it, and I should seek it in Central Asia. Did this first mountain grow in the sea like Stromboli ?

No. 27.—“Parents nourish children; grain and grass grow in the sun.” Mamma and baby, and proud parent; a few clever touches to indicate house, screen, and a landscape, make this picture.

No. 28.—“*Osho* was kind to parents; go out to sea; fish come up; give parents; glad.” *Osho*, like *Tobit*, has gripped a very fine tai-fish with his hands, and he is glad all over. So have I rejoiced over a forty-four pound salmon in Norway.

No. 29.—*Yang-u* made grave for parents; birds take away earth; so carry more.” Two crows are flying away, and old *Yang-u*, like the sign *Libra*, is carrying two baskets full of earth, balanced on a bending pole. He is striding along the snowy road after two crows. A third is flying after him.

No. 30.—“Life-like leaf; if strong, wind tear; so man sick soon die.” The leaves are banana leaves, and the moral of tale is manifest; they tear in the wind, and wither and fall yearly. “He that drinks and goes to bed sober, falls as the leaves do; falls as the leaves do; falls as the leaves do; and dies in October.” So goes the song.

No. 31. —“*Jiu* (a jewel) come out of sea. If from mountain, *jiokino* (a crystal I suppose); so with body when man dead.” I presume that the living principle which is to go on in other bodies, according to Buddhists, is the meaning of this symbol. Three balls upon a tall four-legged table, and two sharp-topped pear-shaped jewels on a three-legged low stool, with a white cover on it, shine “like a good deed in this naughty world.” So good deeds elevate in the next life of a Buddhist man.

No. 32. —“*Gushi* transformed himself to everything in turn; he died.” *Gushi* was a man of the band he is about to

project himself into space from the rail of a mountain temple towards a full moon. He is very ugly, and I know no more of his story.

No. 33.—“Priest get flowers give to Butsu” (Buddha). Shaven boy, books, clogs, and flowers, going into a temple; all books on a table in the background. “Figlio prete,” say the Italians; may you have a son a priest.

No. 34.—“This book was made for children; don’t forget; read.” A preceptor, with his fan in the left hand, sits with a talked reading-desk before him, and portions of four pupils with shaven crowns and shock heads read and say their lessons in profile.

No. 35.—“Japanese alphabets” end the remarkable book which deserves to be better known. The price of it is absurdly small, and the knowledge of Japanese teaching which may be extracted from my squire’s explanation and from the pictures was worth a great deal to me, who love learning, and read by glow-worm’s light, when I have no oil like Shien.” A stone to his cairn.

Modern books of all classes are sold in dozens, and are stored in cartloads in shops. They are rich in illustration, and the art is generally good. Of course evil books can be got if sought; but evil intention is not a distinctive character in Japanese books. Rabelais reminds me of Japanese pictorial art at the worst.

Turn back, and the art is better, and the meaning as pure. “The life of a lady” is an old printed book, full of woodcuts that remind one of early German block books. It is sought by collectors, but the price is small. For action and expression the figures are excellent. They are perfectly Japanese,

and show what life was like when the artist lived. There is not a sign of foreign influences about the pictures. There are the ancient styles of writing which ought to be learned—landscapes, houses, dinners, manners, daimios, dresses, archery, picnics, furniture. It is life as it used to be in Japan. Here, for instance, is the Japanese cabinet, which has gone out of fashion, or has been sold and exported. Here are the arms and armour which have gone into the old shops; here the dresses worn only in theatres. Here is the fight with the dragon, the triumph of the true knight, the flight of the cowardly squire. There is no coarseness, and very little caricature in this wonderful old book made for good girls to study. It is a work of art. From it I learned, by the help of my squire, that a lady's education included legends, and so I set my squire to explain a lot of toy books which hardly need explanation to one versed in popular lore; they are so well done. This is not the place for telling Japanese stories. It is enough for me to say here that I have found a great many incidents which are common to the popular tales of three corners which I had selected for hunting—the Scotch Isles; the Isles of Japan; and Ceylon. If tales have a common origin Central Asia is the probable point of dispersion for tales, people, rivers, arts and sciences, manners and customs, and inventions. But did European missionaries teach the Japanese to print and to make illustrated block books? or did the far East send these arts from China or Thibet to the far West and East? Who invented printing? I do not know, and I do not know where to find the knowledge, unless I go to Thibet and meet the Russians.

I have bought for Chinese toy-books and popular prints:

found none, and I was solemnly and repeatedly assured that one are published in China. The ancients of China illustrated printed books with printed woodcuts, as I am assured the modern babyhood of China certainly has much to learn from toy-books, that Japanese infants have at their fingers' ends. If China sent civilization, the pupil has beat the masters.

I might say a good deal about Japanese books, for they interested me as pictures of daily life, and as records that I could read as I ran; but this is all that I mean to say about Japan and toy-books, and nursery tales, and stupid travels without a single adventure in them. I have extended my Circular Notes so far that they may tear like plantains in a gale if they be stretched any longer. So here ends this log, at the beginning of China and the end of Japan.

No. XXXIII.

STEAMER "COSTA RICA," IN THE RIVER
YANGTSE KIANG, NEAR SHANGHAI,
Friday, January 29th, 1875.

MY DEAR MOTHER,

My last letter was from Ot in Japan, and went East by America from Kobe. I sailed from Kobe on Saturday, and I have been to Nagasaki and over the Yellow Sea in a storm. I believe that a long letter of mine, posted at Yokohama, was burned in the steamer *Japan* near Hong Kong, on the 17th of December. I was within an ace of taking a passage in her, but pluck had it, and I braved the cold, and walked through Japan, as my last letter tells in detail. Four hundred Chinese, two or three Europeans, and a vast treasure went to the bottom in the *Japan*. Two boats are still

missing. They suppose that they landed on the Chinese coast, and that the natives put the men to death and robbed the boats. On the whole, "it is better to be lucky than rich," as a man said to me the other day. I expect a letter from you at Shanghai and the *Times*. Meantime, I write in a smoking-room, with the air outside freezing, and this great dirty yellow river under me, with banks out of sight on either side. Last night we danced to the howling of a cold storm, which dismasted junks, and did other damage, but did not hurt the *Costa Rica*. I have been greatly entertained, but I cannot be amusing, for I have had no adventures. After Ot, I walked to Kioto, the ancient capital of Japan, and there wandered and bought curiosities, and looked at temples, and was a lion myself. When I stopped a crowd gathered—but a good-humoured, pleasant crowd—who amused me, as I amused them. Thence I went to Osaka, and there I did the same thing.

My purchases go home with bills of lading. Unpack if it amuses you, or leave the lot till I come, just as you please. At Kobe I wandered, and bought and smoked. I offered my Japanese boy to engage him as servant and valet; he was willing, but his uncle telegraphed, "Come back," so he went back, and I am alone again. I think that I owe the uncle a day in harvest; but the boy was a good boy, and useful; and it would have been curious to make him learn English well enough to tell me stories, and read the numerous books which I have bought. I am not quite suré whether I am sorry or glad to be rid of my attendant, but rid of him I am. What I shall do next I cannot tell. If it were not so confoundedly cold, I think I should go up to Hangkow,

some 700 miles, in the steamer. As it is, I think that I shall take an early boat to Hong Kong and see Canton, and get warm. I have not been warm for a month, and my fingers are frost bitten, and here I am about the latitude of Suez— $31^{\circ} 12'$, or thereabouts, shivering till I found this smoking-room, wherein to write and get heated. I really have nothing to say, unless I copy my log; so I shall wait till I land—about dark this evening, I believe. I weighed 258 pounds before I started, 208 pounds at the other side of Japan, 191 pounds at Kobe; and I feel as strong as a pony. Such are some of the results of globe-trotting—47 *pounds off* I hardly know myself, I am so genteel in figure, and active on my pins. No bread, little sugar, few potatoes, and long walks, did the job for me, and I recommend the prescription to all who aim at “banting.” The great interest in Japan is to see a whole people changed within ten years. They have changed their habits and their clothes. They have railroads, gas, telegraphs, and steamers, an army and navy, and national debts, paper-money, and wide-awake hats. Ten years ago they cut down strangers, and put them in cages. Not long ago they saw a rabbit for the first time. Thereupon everybody wanted a tame rabbit. One of the officers of this ship sold a rabbit and two young ones for 75 dollars, say 300 *shillings*, £15 in Kobe, 1,700 dollars. £340 were paid for a fancy rabbit from America. At last the Government put a dollar tax on every rabbit, and the mania ended in general slaughter. Tell W——, who loves rabbits, how dear they are. A Rabbit, according to myths, lives in the moon. Those who see him go to the sky. There were no earthly rabbits in Japan of old.

No. XXXIII.

ASTOR HOUSE, SHANGHAI,
Saturday, January 30th, 1875.

P.S.—We got in before dark all right. This morning I have seen the *Times* of Nov. 2nd and Dec. 1st. I have got the letters and shall look for more at Colombo. My letter dates, are 15th and 29th Oct., Nov. 4th, *Times*, Dec. 1st. So my plan of first column advertisements acts well. It is cheap and effectual. This is a bustling place, full of Europeans going to a paper chase in buggies. I went to the Chinese city instead, attended by a Chinese of this house. I missed him, and presently found him in a crowd with a mark on his cheek, and rumpled cuffs. He had said to me, "Take care of your pockets," the wild guides took offence and cuffed him. He is greatly disturbed because I did not join in the fray, and protect him from the roughs of a great walled, wild Chinese town. I did not find out what was up till the row was over or nearly. Then I sauntered into the midst smoking, with my hands in my pockets, heard the complaint of an indignant little opium-smoker, who said that my boy was a long-tailed —, who abused the Chinese, and then we sauntered out again calmly, and I came here to write to you. I am not much tempted by Chinese wares so far. The art is inferior, the prices superior, and the wares are like those which abound in tea-shops in London. Just you look at my box, and you will all admire Japan curios. Whatever I am to do with myself till the 5th, I don't know. I might go to the river but that would cost ten dollars. I am going to the river.

I must now go dine, so thanks for all your news, and good-bye.

J. F. C.

P.S.—For something to do, I have re-written a geological paper. Now it is done.

No. XXXIV.

SHANGHAI,
Saturday, last of January, 1875.

MOST EXCELLENT V.,

For your budget of news many thanks. Your date is before Gunpowder Plot day, and I owe you one. My Japanese letters you must get from your mother; I cannot be bored to repeat them. I forget if I described one scene which amused me. It was bitter cold, with snow on the ground, and I was far up in the Japanese highlands. I stopped at a tea-house to get a fresh baggage-horse, and went in to drink sugarless tea. While drinking it, a voice came out of a corner, and my boy said, "that is the house-woman bathing." In front sat her son writing bills. I looked, and there at my shoulder was a great iron caldron on a fire, and in it an old woman in her birthday suit splashing. I poked the fire with my stick, and told my boy to say that she would make good soup. She laughed, and splashed, and rubbed her old shoulders with hot water, and never suspected that I was a little surprised. Such are some of the manners and customs in Japan. For the rest the people are good-humoured and pleasant, and have charming manners, and I like them. Here my chief impression is wheel-barrows. All over this town one meets wheel-barrows with one wheel and two seats, one on each side of a back like a jaunting car. A Chinese

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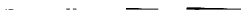
holds two spokes, and when he has one passenger he leans to one side. The passenger sits with his arm on the back, one leg up, and the other dangling in a loop of rope. Fat old women ; sober, grave, long-tailed blue men, and critturs of all Tartar kinds are to be seen in all manner of quaint dresses, wheeling each other about in these wheel-barrows, to my great entertainment. Anon comes a Sedan chair, poised on the shoulders of tall, well-dressed Tartarian Chinamen, who pace solemnly along, while some swell in spectacles, or lady in a bonnet, looks calmly out of the windows. Then whisk comes a buggy, and puff goes a steam-launch on the river, and Europe dashes past Asia to go to a paper chase, or to a banking-house, or to some Western institution in this far East. But everything Chinese seems to me slower than Japan. There men ran like athletes with jinrikishas, which are enlarged perambulators ; here jinrikisha men shuffle and shamble in ragged clothes, and the wheel-barrows walk. In Japan everybody washes and bathes daily and frequently ; here they never wash, and they are ragged. But the Chinamen are twice the size, if they have half the pluck ; and these jolly old Conservatives of the East are very interesting after the Japanese Radicals. I quite fell in love with a blue Chinawoman out walking. Curves were her outlines. The Japanese aim at tight garments, trot and turn in their toes ; my Chinese beauty waddled.

I wish I had news to return for your budget, but I have none. I came over with two East Lothian lads in the steamer ; both officers on board—one was from Prestonpans, the other from East Linton.

We had many talks about the *Journal* at the *Club* of East



SHANGHAI VEHICLES.



lothian. One was caught by the tide while robbing a hawk's nest with his brother near Tantallon, and had to sit the tide out on the cliff. The quantity of postage that I shall have to pay begins to frighten me. Thank G. and K. for their budgets, which were so interesting that I am going to read them all over again before I burn them. I have that habit, to write scandal as much as ever you please, and you will please me. That is the only thing which I cannot get out on the tramp.

February 3rd.—Last night I solemnly read, in order of late, all my home letters, and burned them all. Now I am going out to post this and get my ticket, and wander about the Chinese city. My impressions have grown to include thieves, rogues, and humbugs, dirt and stinks. I can find nothing that seems real in this great town; everything is a sham down to the language. "Get my breakfast quick" is "Boy, you go top side, catchee chow, chow—chop, chop." I shall not stay long in Chinese settlements. I cannot stop to draw or buy but I gather a crowd; I can't walk without being a gazing stock; I am run over by coolies and wheelbarrows, and I am getting to hate the Chinese.

Fare you all well.

J. F. C.

P.S.—This picture is a fashionable foot; I see lots out walking, staggering, and tottering.

No. XXXV.

ON BOARD THE "TIGRE," MOUTH OF THE
 YANGTSE KIANG RIVER, CHINA,
Friday, February 5th, 1875.

MY DEAR —

I am greatly amused by the Chinamen, but they are rogues and dirty dogs and disagreeable. Yesterday I got hold of a long-tailed, slipshod, ungartered, unwashed creature, who has been on a man-of-war, and speaks pigeon English. I picked him up in the street, and after him I crossed a bridge into a new world. Rows of coolies carrying water from the river rushed shouting, "Hi, ho! hi, ho!" along narrow, roughly-paved, dirty Chinese streets, swarming with people, who swarmed with live stock. Pigs, sheep, dogs, cocks and hens blocked the way. Now and then more shouting proclaimed the advent of a Mandarin. First came two pair of men in fancy dresses, with tall laced hats, yelling the Chinese for "Clear the way;" then came some five or six pair of long-robed Tartaric men with shaven polls and long tails and arms of sorts; then a chair carried on the shoulders of strapping bearers, in it the swell gravely gazing out of the front window; then a dozen more Chinese officials, and then the crowd closed in like a human sea, and jostled me as before. Then came a string of shouting coolies carrying goods to the river, and the fleet of junks, from under which the water-bearers took their pails. Then I fell in love with a Chinese bed, and asked the price 70 taels—about £20. "Thin-chin" I said and on we went. Then I fell in love with a Chinese saucer of tea, and asked the price? One tael. Then I got tired and went to bed. Then on to a

open space, where jugglers were performing, and a Chinese doctor was putting a plaster on his own wounded arm. Then to the "number one mandarin place," there I paused. Behind wooden bars, in a regular cage for wild beasts, stood criminals, sliding out their paws for charity, like monkeys at the Zoological Gardens. Some had great heavy square collars on round their unhappy necks, so that they must suffer horribly when they try to sleep. They "makee steal," said my guide. Then we got to coarse instruments of torture, a square frame with four legs, into which a criminal is put. "He givee much little lice" (rice), said my man, and this one "makee dead two day," pointing to a tall one, in which the victim would have to stand on his toes or hang by the neck in the hole in the frame. "Mandarin keepee key," he explained further. Then we went on to a quiet place, where a lot of China boys were playing toss farthing with cash, and occasionally kicking a shuttlecock with the soles of their feet, struck inwards and upwards. "Chin-chin," said the boys, and clustered round me to stare. "Velly few Englishmen comee this joss-house," said my guide. We went in through dark passages, past long-robed priests followed by the boys, and following the doleful sound of a minute gong, and stumbled into light shining in at a wide open door, and saw how it struck upwards on the golden face of a gilded Buddah, thirty feet high, I reckon. A row of golden disciples were seated right and left of the prophet, grave and sedate as their master, and eight or ten feet high. The light lit up clouds of incense. Seated at ease, with back against the wall, in a kind of cage, sat an old fellow of grave countenance. In front of him, on two loops of cord, swung a bundle of straw,

balancing like a pendulum. At long regular intervals he struck the gong, and then followed the roar and crash which had led me there. My guide explained, "One piecee woman makee baby makee dead, chin chin joss." "Chin-chin joss," said the boys in chorus, and grinned. The old man never moved his face, but sat still till it was time to bang the gong once more, and then he did it. Outside, in a courtyard stood a mighty bronze vase about eight feet high, of the old pattern, which I had got to know in Japan. Near it stood carved monsters, which you may see in any tea-shop, but bigger, older, quainter, and uglier than any that I had seen before. Turning back from the light there was the great golden Buddha, with his silver glory, and the light streaming upon his placid, meaningless face, contemplating the soles of his feet, and reduced to a state of mental inanity, which is beatitude, according to Buddhist priests. If I had not left my colours at home, I should have tried to sketch that joss, and his house and his votaries, and the swinging bundle, which may have been the baby or its semblance, for anything that I know. Out I went, and wandered on past a sunny wall. There sat a man plucking a fowl. Such a fine fat cochineal as would have gladdened your henwife's heart. Beside him sat a half-stripped old Spagnoletto beggar arranging his garments. He picked and he ate, and I thought of apes and Darwin. Instinctively I made my walking-stick into a tail, and I walked on solemnly trailing it after me, saddened by my ascent from the human ancestor to the Chinese. A horrible baby is now howling close to me, and I am a baby too, once, long ago, I may be an ape or an ape again, and again, and again, and again, and I wandered

about that Shangai city after the wagging pigtail of my dirty guide till my feet were sore, and then I crossed a bridge and was in the region of gas and pavements, and steamboats and magnificent European houses, and buggies and grandly-dressed Caucasians once more. They glared contemptuously at my rusty coat. I got a bad berth on board this ship as a ragged loafer, I suppose, and therefore it has occurred to me to write you this letter and ask for new cloth.

Send some photographs to my Japanese friends; that is, if I have not already asked some one to do this. I have thought of doing it so often that I am not sure whether I have ever put my thoughts on paper or not.

Here we are sailing on the Yellow Sea, which is yellow with mud. The sky is yellow with haze, and I am going to try to sketch. I have begun to feel warm enough to enjoy life. I expect to be too warm very soon. Meantime, the sunshine after the snow and cold of Japan is pleasanter than last week's snowstorm here. This ship is magnificent, and we were promised grand entertainments. I got little to eat this morning, the habit on shore being to feed at noon. Here at noon we were set down to a table without a cloth, and with very little on it of any kind. We are a numerous miscellaneous lot, and it was ludicrous to hear the different tongues exclaiming, "Ich bin hungrich" "I'm starving." "I guess this is the meanest tiffin I ever saw," and so on. Two stewards only attended, and the miserable trenchers of sausage, tongue, and thin bread were cleared and replenished many times before we went on deck to smoke and bask in the sun. "I reckon if you put a charcoal mark on that man's face," said a Yankee astronomer to me, "it would

come out white." So it would, for he was a Nubian stoker. Near him a thin slender Malay or Lascar, or something or other, was shovelling ashes. A lot of Frenchmen danced past gesticulating. A white-haired solemn sailor walked solemnly after them. "Es du Normand?" quo' I; "Oui," said he, but he was a Norseman. Then came by a Chinese man with a pigtail, and a pair of moustaches, shrugging his shoulders and amicably talking good French to the captain. He is a Jesuit, and he nearly made us late for the tide by coming on board at the last moment. A., who started in July when I did, and whom I have been crossing ever since, is on board. And now I have written enough for a while. So, good-bye. Send this to head-quarters; it is my log. Page 180, vol. ii. Love to you and yours.

J. F. C.

No. XXXVI.

HONG KONG,

February 9th, 1875.

MY DEAR MOTHER,

I wrote to —, and this goes by the same mail I hope. I expected to find lots of letters here. I have found none, and must wait till Colombo. *Vide "Times."*

I am going to Canton, and then southwards, but which steamer I shall take, and which way, I cannot yet tell. I may go to Manilla in a P. and O. boat, and so get to Singapore and Colombo. Meantime, as I have nothing to tell, I shall scribble no more, but go out, and march about these queer streets. The town is like Lisbon, an amphitheatre but at the base of a hill 2,000 feet high.

Yours affectionately, J. F. C.

which covers it and hides the view. Temperature about 68°, light obscured.

People are carried about in chairs on Chinese shoulders, but I who have walked Japan, walk Hong Kong.

J. F. C.

NO. XXXVII.

CANTON,
Thursday, February 11th, 1875.

MY DEAR MOTHER,

I left Hong Kong yesterday in a mist, with the glass at 68°. Here I am in drizzle, with the glass below 59°. The voyage up was beautiful and interesting. First a sailor put down an iron grating and a padlock on it over the stair. Then I was aware of a sentry in uniform with a loaded musket, and then I found more of them, and that the captain's pockets were full of loaded revolvers. They explained that no less than five river steamers had been captured by pirates. The last adventure was in this wise. An old man and a young began to dispute on the lower deck of the *Spark* about six months ago. The row waxed furious, and the captain came from the upper deck to quell the riot. The old Chinaman rushed to the carpenter's bench and snatched an axe, by way of striking the young one. The carpenter cried out, "Tie him up."

"Pirates are never tied," roared the old man; and then twenty or more drew long knives from their boots, and went for the captain. He tried to shoot, but his pistol missed fire. Then he ran for the upper deck, but the long knives cut his legs, and he fell. Then they cut his

throat, and the carpenter's, and the mate's, and then they wounded a sailor, who jumped overboard, swam, and escaped with his life. Then they had the ship. The Chinese passengers they sent below, the women they robbed of their bangles, the men they stripped of their cash. They rifled the steamer, and then they went off in the ship's boats. Five were caught, and beheaded here in Canton. I am going to see their heads to-morrow. I saw the *Spark* all right, steam off to Macao this morning, but with a new crew and captain. For that reason our blue sentry walked the upper deck, and the lower deck was locked with an iron grating, under which were the Chinese. Then we got to the famous Bogue forts, which the Chinese are mending since the Japanese scare. Then we got to sunshine and to swarms of junks, and to pagodas, and to the old port, and finally to this curious old city, with its crowded river and strange sights and sounds. I took my quarters in the "Canton Hotel," kept by a Portuguese. I land at the foot of a stair, walk past a boat in the entrance hall, and up to a first floor with a bamboo stage overhanging the river in front of the windows. My room is a boarded glass-doored place separated from the rest of the rooms and a central dining-room, but open above. Through it the monsoon blows fresh and damp, and the whole is like a stranded ship. I hear the sound of oars, gongs, and crackers; I look out, and see junks with roofs on them, and gardens on the poop or amidships. I get into a house-boat navigated by a pretty little girl about ten or twelve, with bangles on her bare legs and arms, and by a stout damsel, and a pole long-legged Chinaman. In a jiffy I am off, amongst a hundred boats, and the river is a

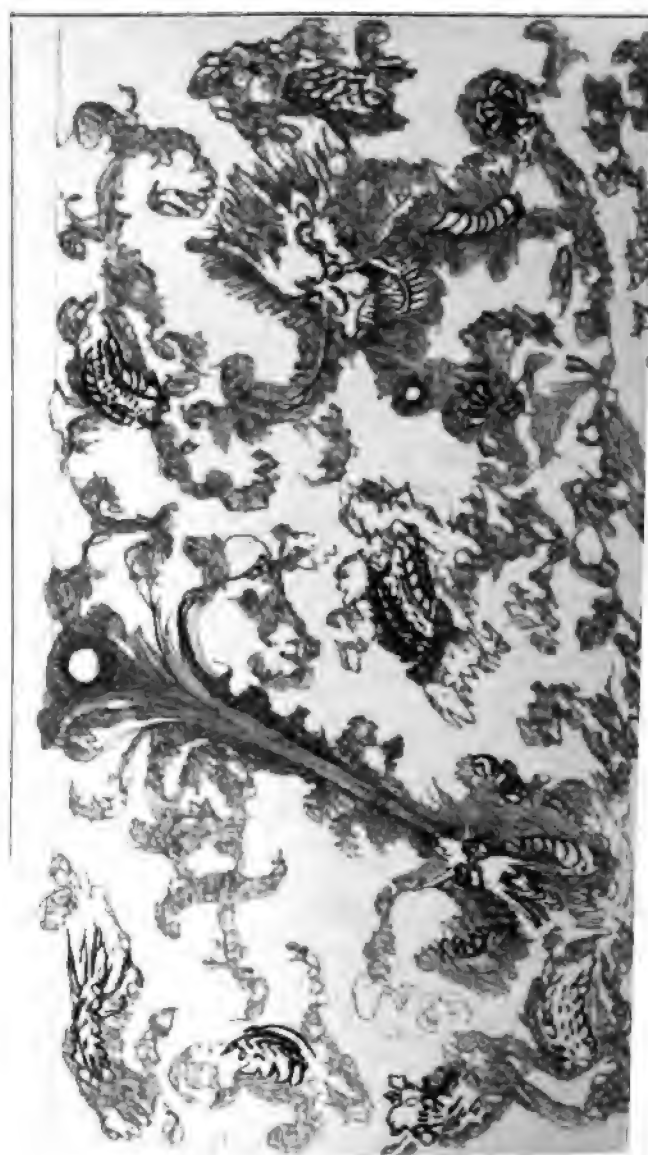
l boats where people sing and drink tea, and there
aging damsels, with faces more painted than a
a circus. Then I am among fish and onions, and
aterns, and shops, and crowds, and chairs, and
shing and roaring, and then I turn into a temple.
nd more crowds. The last I was in has 500 gilt
it larger than life, each with a candlestick and a
es for burning joss-sticks at his feet. The air was
the incense. I got to the high altar at last, and
own with my guide on a bench, and watched men
m lighting whole bunches of joss-sticks and doing,
. Then I looked at bronze pagodas and dwarfed
china pots, and then I dived back into the toy
hich entertained me vastly. The place was worse
than other streets, and the narrow lane of day-
hidden by red signboards and curious lanterns.
fish, some peacocks, some birds flying, all with
s eyes and a place inside for the oil lamp. Those
ase hoist their wares on long bamboo rods to keep
of the crowd, so the air is full of flying fish and
Inside the shops boys are beating drums, and
toys, and making a din amongst dolls and gilt
l a mass of curious contrivances, each of which is
e as to the squalling long-tailed babies who rejoice
oys and buy them. My guide would not let me
or in the street, manifestly because he could not
lack mail on these wandering hordes. He led me
song. There I found a large courtyard open to the
ul of Chinamen. In front on a stage were actors,
r attired, performing some comedy or other which

I could not understand. But that was something quite new to me. Then we went to a tea-shop, and drank tea and ate cakes for tiffin. Then I was led past shops and into shops, and was aware that I was a subject for plunder, and then I brought my Japanese knowledge to bear, and bought nothing or very little. I might have bought vases for £25 as tall as I am, and ivory card cases for £1, and ivory boxes for £20, and sandal wood for £1, and jugs for 30s the set of four, and a brooch of silver and kingfisher's feathers for £1, and so I might have easily emptied my purse. But I was only tempted by one butterfly box and five enamel cups, and there they are on the table telling me I was a gaby to the tune of 10s. What I have got is a whole gallery of mental pictures of life in China as it is, and a thirst to see more. Yesterday I saw a duck boat from the steamer. On each side of the boat are great outrigger baskets, in which the ducks roost. All day long they paddle about in the muddy rice fields, in flocks of many thousands. But when night comes a signal is hoisted and a call sounded, and then the whole band scuttle for the boat. The leader is an old trained bird who waddles up a ladder as fast as he can toddle. The rest follow, and the last are flogged, so the whole rush for the boat. About this time of year they are slaughtered, split, and dried in the monsoon for market. I mean to visit a duck boat before I start.

At dinner yesterday I was introduced to Mr. —, and we found that we were acquainted at Arranches

I must go smoke Chin-chin





THE DRAGON MYTH.¹—Anybody who chosēs to look at China-ware can see that Dragons pervade Chinese art. A particular species is the special property of the Emperor. Nobody else in China may lawfully own China-ware adorned with the portrait of that particular heraldic beast. The Empress only may own china adorned with Butterflies. Knowing this, I have always wanted to learn Chinese Dragon stories. Accordingly I tried all I could at Canton, and came bad speed. One Englishman who knew Chinese well told me that books are full of Dragon stories. He promised to look them up, and send me a lot. One he remembered, and that is all that I got.

There lives in the sea a great Dragon, who keeps in his maw a precious pearl. When he is in the humour he pokes up his horned head, and his four legs and tail roll about while he blows out his pearl, and makes it dance like a ball on a fountain. If any man can see that pearl, he becomes a seer, and knows the future. But that Dragon is very cunning. When he knows that a man is near, he sucks in his breath and his pearl, and sinks.

¹ 1. See twenty-four volumes of Gaelic Popular Tales, orally collected in the West Highlands.

2. A manuscript volume on "Oral Mythology," written 1869-70.

3. A manuscript volume, "Celtic Dragon Myth." English translation, and notes. Bound February 1870.

4. A MS. collection of Sinhalese Popular Tales, gathered from various sources in Ceylon, by G. W. R. Campbell.

5. A collection of Japanese Toy-books, containing stories illustrated. Collected 1875.

6. Several shelves of printed books and MSS., containing published collections of popular tales, and essays on the subject by numerous authors.

All at this date, January 1, 1876, at Niddry Lodge, Kensington.

There is not much of a story in that. A theorist might call the Pearl the sun, and the Dragon the sea out of which the sun seems to rise off China. But then everybody sees the sun, and everybody is not a seer. The usual solar myth is made to turn upon the setting of the sun in the western sea. But if the solar myth grew in Central Asia, the sun must have seemed to rise out of a dry plain, and set in it, or to rise or set amongst mountains, or marshes or lakes. The chief characters in the Dragon myth are a man, a woman, and a sea-monster. The explanation makes the woman Dawn, the man Day or the sun, and the serpent Darkness or storm. I have watched Dawn from many a strange bed out in the wilds, and never saw how a savage could turn growing light into a woman. Dawn has no shape. Sun and moon have shapes like faces, and they have been personified as gods, male and female, about whom stories are told. Those which I learned at school made the sun a god, whose human semblance is in the Vatican. The stories which I have learned for myself often make the sun a woman, and the mother of mortal men.

"I want to know" whether the woman rescued from the Dragon by the man, may not have been a real woman, offered as a sacrifice to a sacred serpent, or alligator, or shark, or whale, by those who built snake temples along this Asian coast; and whether the hero was not an ancestor who saved the woman's life, and was promoted?

Whatever be the answer, the Pearl Dragon is a favourite subject in Chinese design. In Japan I bought, in a rag-shop, a Chinese dress, embroidered to represent waves, a sea-serpent, and a sea-monster figured by Pontoppidan Bishop of Bergen;

the dragon's four feet and claws and his horned head and goggle eyes blowing out the pearl. He is surrounded by flying things, which may be birds, bats, or butterflies, or flames. In the Tartar quarter in Canton I found similar designs sketched in black on white walls opposite to the quarters of generals or officials of rank.

I tried to copy one of these pictures, but it was difficult to draw, especially in the middle of a dense, dirty, rude crowd of street-boys and rough soldiers, and beggars. Such as it is, the sketch has been facsimiled. Compared with Japanese sketches, it appears that the conventional Dragons are the same in many ways.

I want to know what they were.

One of the famous temples of Canton was called that of the "five lamps" by my guide. I found from a book that he meant to say "five rams," and could not pronounce the word. I went there and found five stones upon an altar. So far as I could make out in a dark place on a grey day, these are the fossil-head and four bones of a great Saurian turned to red sandstone. The equivalent of an altar-piece behind the holy stones represents a Saurian Dragon in black and white, with teeth and claws. Under Canton, its mud, and the Pearl River, are beds of red sandstone. Near the temple of the "five rams" a bit of the rock is kept bare to show the sacred footprint of Buddha. All that I could see was weathering. But when I was a child, I used to go to look at a hollow weathered in a block of stone, which my nurse and I called the giant's footprint." We invented that legend; the shape of the hollow suggested it to us, and shape appears to have one as much for other myths at the other angle of the old

world. Is not Adam's footprint at the top of Adam's Peak in Ceylon? What was the mythical Chinese Dragon, who is here associated with Buddha, and who is said to be swallowing the sun during an eclipse? In Japan he wanted to swallow a woman, who is in the family-tree of that Mikado, who is descended from that Sun, who was a female divinity. In China I find the sacred fossil bones of a Saurian in the chief temple at Canton; the Pearl Dragon of the sea painted on the walls; and an Emperor and Empress related to the sun and moon, whose devices are Dragons and Butterflies. The story must be somewhere. I do not yet know enough to see my way, but I seem to see that man, woman, and dragon in popular myths were man, woman, and reptile or ravenous fish, before they became kami and gods and the sun and moon of mythology.

NEW-YEAR'S CUSTOMS. — In Japan, where people are reformers, I had a vague suspicion that new-year customs which are like our own might be imported. In China, which is Conservative, I saw that the new-year customs of East and West must have grown independently. New style prevails in reformed Japan; old style survives in Chinese dates; so I had a series of new years on the Asian coast, and their customs were alike. Everybody must square accounts, pay debts, and balance books or forfeit credit in China; so the national stocktaking corresponds to our "Christmas bills." We decorate shops with evergreens. Every Chinese shop has a kind of family altar set up in it, decorated with paper and gilding, set out with fruit and flowers, which are new-year's offerings to some divinity, or to the manes of ancestors. The reason varies, but the

custom is the same as our own. It is a time of festivity in England and in Asia, when men sing and drink strong liquors, and give gifts, and make ceremonial visits, and leave their cards or send them round. The card of the Chinaman is a grand affair, but the French custom and the Chinese are the same. The new year is a festival, and the festivities are the same in kind. The rich Chinese give theatrical performances gratis. All who can afford it give gifts to children. Nobody works that can afford to take a holiday; everybody that can take a holiday enjoys it according to his taste. He invites, and is invited; feasts, and has a jollification. It was amusing to watch a door open and to see a whole family of Chinese ladies doing the civil to a whole batch of lady visitors. No interpreter was needed to explain the looks and actions of these polite persons of rounded outline, with their painted faces, and feet like the knob on the end of a wooden leg. It all meant pretty manners amongst kindly neighbours who had been paying "the compliments of the season." Some kind of Chinese religion is mixed up with the season. The Hong Kong junk-men seemed to purify their boats with fire and incense. Some one recited something, and one stout mariner banged a gong for ten minutes while I looked on. The temples were crowded in Canton. Grand ladies went through prostrations careless of the crowd, and devoutly cast offerings of inscribed paper into a fire prepared for the purpose. So our Chinese passengers cast gilt paper to the winds of the Pacific, which fluttered away in clouds, —offerings to their gods. From the day of my arrival in China till I left it, a running fire of squibs and crackers made day and night resound with new-year rejoicings. The

streets of Canton were littered with the *débris* of burnt crackers all the time I was there. But the Japanese Torii of two green trees with a rope between did not appear in China. Nobody ever told me about these Eastern customs; they may be news to others, so I add these notes to my letters.

One other point of resemblance struck me. Late in 1873 I was at Pisa, studying the pictures on the walls of the Campo Santo. Early in 1875, my guide led me to see a set of carved models in a Buddhist temple in Canton. They represent the tortures that Chinamen inflicted on each other, in fact, promoted to the future life of their ill-doers. It is hard to say which artist had the stronger imagination or the worse models. Christians and Pagans have tortured each other as much as they possibly could, and these realities inspired art in the far East and the far West. The Campo Santo was empty when I was last there; the Canton "temple of horrors" was densely crowded. Beggars, numerous and importunate as Neapolitans, swarmed there; soothsayers plied their trade, and reaped a harvest; countrymen gaped and stared. But in the midst of all, earnest men and women prayed with heart and soul; and let us hope that their prayers were heard, though ill-directed.

No. XXXVIII.

ON BOARD THE "HYDASPES," CHINA SEA,
February 19th, 1875.

MY DEAR MOTHER,

Page 197, vol. ii. Log.—It will save time and trouble if you will get my letters copied.

I have so much to write under difficulties, and I can hardly find time to do so. I am writing now at the top of a

camphor-wood box in my cabin, and the old screw steamer goes jiggety-jig-joggle. Truly this is a wonderful change. Up the river it was cold and disagreeable. We crept round the fire, and the monsoon whistled and sang through the house all day and all night. I was glad to wrap my plaid about me outside my thin sheets and blankets, and I never saw the sun for a week at Canton; 49° was cold for the tropics, and I was cold. On the 14th I went down 100 miles to Hong Kong, and found 62° . The glass had ranged 10° warmer near the sea all this time. On the 18th we whisked round the island and got clear of the fog. The sun shone, the sea was bright blue and green, and the hills the colour of sunlight on barren red sandstone.

Brown butterfly sails over strange junks flitted all about, and spray glittered, the sea danced, and we were in summer weather in an hour. This morning we are in the warm stream of the Pacific once again. My bath of salt water was 74° , and the air is 76° in my cabin, and 73° in the coldest place I can find in the ship. Here I am without any coat, listening to the crowing of cocks, and the cooing of pigeons, and the lowing of cows camped about the main hatchway. I look out of my port, and there is the crisp blue Pacific, and the north-east monsoon driving me from China to Singapore, or somewhere else. All this time you are cowering over fires in fogs, and shivering in Old England, and I, globe-trotter, have got the best of it for the present. I got your communication of the 10th of January on the 15th February, at Hong Kong, with the *Times* to the 8th January; and now that I am clear of China, I may express my opinion, which is that Chinamen are rogues of the first water. Everything is

sham, and costs a dollar. Every man is engaged in "squeeze." If I buy, my guide gets 10 per cent. from the vendor, and cheats me in change. If I buy a camphor-wood box for two dollars and three-quarters, a man tells me that real camphor-wood boxes cost 10 dollars, and that mine is oiled with camphor-oil; I believe neither. One wanted to sell me a box for 10 dollars, the other puts enough of real wood in his box to make it smell nice where it is planed and scraped, and possibly may oil the rest. In any case I shall presently send you home a camphor-wood box, full of curios and shavings, and time will show whether it was worth one and a half dollars or not. It looks like old chests made new, and it probably contained deceased Chinamen at some period of its existence as a box. That is a sample of Chinese dealings. The other day I took a fancy to buy a blue silk long Chinese coat to smoke in. I found a shop full of the articles old and new; my guide did all he could to get me out, but I was obstinate, and would not budge. The whole shop was gay and gorgeous with pomeelos and oranges, and gold paper, and new year's decorations, and the owner looked jolly. I tried on garments new and old, and a great crowd in the street looked in over a carved rail, and laughed and railed at me when I was arrayed in their garments. At last we got to the price. It was 17 dollars. That of course was absurd; I offered 12. My guide interpreted. At last I said, "Tell the gentleman when I say 12, I mean 12, and if I go out, I will not come in." The guide interpreted with strong emphasis, and presently I walked off with my purchase, and the poorer and the shop were richer. Achin, my guide, is a very good fellow, and a very good fellow who uses to show people

about Canton for love. The man does the same, and me he charged one and a half dollar a day, 6s. 6d. At first starting in the boat to cross the Pearl River, he said, "I always take a chair." He walked once with some Englishmen, and he was so tired that he could not work next day. I grinned inwardly, and walked him nine miles about the streets. "You get an oble guide," quo' he. "Very well," said I. Next day I gave him another march, and the last day I gave him such a tramp that he limped in his China shoes. Each night he said that he would not come again. I told him that he had my free permission to go to the D——I. Each morning he came, and each day, all day long, I walked after his long tail, and took a vicious pleasure in avoiding "chairs," and in refusing to buy anything at any place to which he led me. I could hardly get him back to interpret when I stopped. "Ole man walkee slow," he said to Colonel B., who walked with us one day. By the way, I must be getting old to look at, though I don't see much change in myself of late. A Chinaman, after stroking my beard and hands, asked if I was much over 60? I confess to 53, and feel like walking Achin off his slippers. "Pigeon English" amuses me greatly. All R's become L's. "What are those cakes," quo' I. "Boiled lice," said Achin. "That is Lady Camphor-wood box," said Achin, and I thought it was some female box, but "lady" is Chinese English for *really*. Yesterday, A. did not appear at breakfast. Captain B. asked a Chinaman where he was. "No. 46 go back," said the long-tailed waiter. Then he threw himself back and shut his eyes, and we understood that No. 46 had gone to sleep again, and sent to call him. When A. was almost late, his guardian genius said, "You no packee

— No. 45 one piecey man long time walkee." "What time shall we get in?" said a Briton to a pilot. "I thinkee No. 11 can do." I was civil to my waiter at Shanghai, and gave him a tip. "Good-bye," I said. "Goodee-bye, ole man, take eale of ooself," said the waiter, quoting some traveller, and I departed giggling. But nevertheless I was "Ogee San," "the old swell" at Yokohama, and I must be "lady" getting old at last. My name is carved on the top of my camphor-wood chest. I carefully said "kam-bell." I asked a man to read the characters carved, and he read "gum belly." The gunner has been in to look at it, and says that it is genuine, and as pretty a bit of camphor as ever he seen, and "lady" very cheap; and he is a Briton, and him I believe. I did not see one single bit of genuine old china in Canton. I looked at all the old streets, stalls, and strange shops, and eatable stands, and not one single scrap of *old* china did I discover. But I was told that two Frenchmen, who seemed to know their trade, had bought hundreds of dollar's worth of old china for the French market, and hoped to realize thousands. I pity the French. Silks are sent from France to get the Chinese marks, and return to be sold in Paris as Chinese silks. A merchant engaged in the trade told me so. Ivory dust is squeezed with glue into moulds, and the result is an ivory figure, sold as carving. Porcelain is sent to Canton from Germany to be painted by Chinese, and to be sold as china. In short, the whole of this part of the country is one great sham and swindle. But the people are not so bad as they have been called. When I stopped to draw or glower, a crowd gathered. I had hundreds about me, staring right into my eyes, examining my clothes and person with extreme

lack of courtesy. But I gave one fellow a pinch of "baccy,"
another a light. I grinned in the greasy face of another, and
said "Chin-chin," and I doffed my wide-awake to a greybeard.
Not one ill word or deed fell to my lot in Canton. I believe
that small boys did call me a "Fan quai" (foreign devil), but
acting on the counsel of Mr. Brown, I replied "Tong quai"
(China devil), and we were quits. As servants they were quite
excellent. You see a long-tailed, patient, pale man, carrying
out a child all day long, and the child gets quite fond of
him. Labourers, sailors, navvies, &c., can be made out of
Chinese coolies at once. It is a caution to see two little men
climbing up and down Hong Kong with a big Briton on their
shoulders in a chair. I respected the Chinese, and not wishing
to be lowered in my own esteem, I never was raised on their
shoulders, but did walkee walkee there. The women work
like the men, and are equally polite. "I velly solly you go
away," said the boat-girl at Canton to me. The Hong Kong
junks that brought me off was managed by an old woman,
with a baby slung on her back. As she stood and rowed the
long paddle, she rocked the cradle of nature, and the baby
nodded over her shoulder and went to sleep. Forward were
two children rowing right well. In the bow was a single
young man; somewhere under hatches were more of the
family. Fancy A. with her youngest on her back working a
heavy oar in the biggest C—— boat, and Nelly and Walter
pulling bow-oars; that was about the size of my Hong Kong
crew. I need not add that I paid them double fare, and that
they all said "give me more," and that I said "Chin-chin,"
and did not. So my impression of Chinamen is that they are
industrious, laborious, persevering, hardworking, patient,

mercantile, rogues, cheats, and humbugs. It was quite refreshing to fall in with an ugly little pepper-pot of a Japanese at Hong Kong, and get his real prices at once, and recognize that they were fair prices, considering the distance and the profit. It was pleasant to ask, "Have you got any old things?" and to be answered at once "No, all these new;" yet there were vases like those which Chinese wanted me to buy as old enamel, and which I knew to be modern Japanese, made at a town which I passed on my travels.

So I prefer Japanese Radical Reformers to Chinese, who are the most conservative people in the world. Tell W. D., M.P., with my kind regards. Meantime, once more "Chin-chin."

J. F. C.

P.S.—77' in my cabin, and tiffin time.

NO. XXXIX.

"HYDASPES," AT SEA,
Wednesday, February 24th, 1875,
Lat. 4° 36' N., Long. 105° 11' E.

MY DEAR MOTHER.

On Tuesday the end of the piston rod slipped through a nut and we broke down. There we lay. Thunder growled, rain poured till it roared on deck, like a torrent of French drumsticks, beating our big kettle-drum. The sun came out, and we sweltered in heat. A shark came under the stern, then more, then a flock of them, great and small. We counted ten. We fished for them, but no; they were waiting for us. We set sail and made 25 miles in 24 hours. The engineers disconnected the engine, and then tried to make one of the sails work as a propeller, but they never got

over the dead point. Omen of our approaching fate. Then the engineers fell to hammering and boring holes, and their crew of dark Africans hauled and worked, and sang wild melodies below, which ended in *hissa*. I lay on a bench or in the arm-chair of some more provident passenger, and read *Pelham*, and thought of little Snow-white and the bears. "There's some one been sitting in my chair, and he's sat the bottom through." At food time we gathered dismally round a table over which wagged a web of brown holland hung on a pole, which a rope and a dark-skinned graceful boy caused to wag to cool us. The brown boy in white clothes with a red turban on, swang gracefully to and fro in a brown loorway hung with green curtains, and looked a picture. He shifted his rope from hand to hand, he shifted his weight from foot to foot, he bent his knees, and folded himself up in a heap on the floor; but whatever he did gracefully, he pulled his rope like a darkey on a clock, and the brown holland web wagged on to cool us. But we were leadly slow. We went on deck and smoked. I went to bed, and near me children wailed lamentably, cocks crowed in their coops, ducks squattered in theirs, geese cackled, sheep baaed, an old cow lowed; but the cook was waiting to execute them in turn, and the cow had tried to commit suicide by eating a large bundle of oakum. So I sweltered and lozed, and dreamed dreams suggested by the sounds and smells of the farm-yard. At dawn I was up and into a bath of salt water at 80°, the coldest that could be got. I went on deck, and there we lay swinging in the swell and fanned by the N.E. monsoon. I looked over the stern. There, far down in the bright clear blue sea, gleamed white and glistening a large

square fid of fat pork. There, close to it, a long brown ghost of a fish wagged his tail, and waved his fins in derision. He knew better than that; he was waiting for us. As I was waiting for breakfast, as the cook waited for the innocent baa-baa's and cock-a-leerie-laws in the farmyard about my hatchway.

I finished *Pilham*. I got some mud from the bottom of the sea, and examined it, and could make nothing of it. I went below, and made curves on bits of paper to represent temperatures endured; culminating in this temperature endured at 80° everywhere. And then I sat me down to tiffin, and ate salmon, and thought of the Arctic circle. When—hooray! the screw began to turn, and off we set clattering as before. The engineers have bored a big hole, and they have stuck a steel peg through the piston rod. They have screwed up their steam boxes, and opened their steam pipes, and we are off from the sea of sharks to the land of cakes, or to some other land of promise. Broad grins broke out on every face, beer choked voices that would have cackled for joy. We ate our tiffin, and I sat me down to write a letter, which will go in this ship, and ought to reach London before the end of March, unless the ship breaks down again.

J. F. C.

No. XL.

SINGAPORE,
March 4th, 1875.

MY DEAR E.

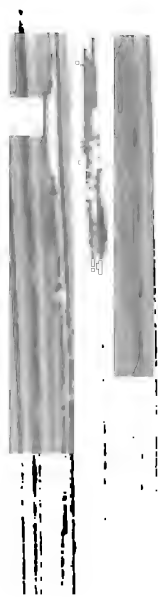
As this is to be horticultural, I write to you. —
 had no time with him at five on board of his French
 and then drank champagne and then dragged me

about in the dark to visit various ships, over gangways, and through mud, ropes, and chains, into dark, hot, disagreeable cabins. Then he led me to shore, and after various foot-breadth escapes I got my galley (*i.e.*, cab), and got back to my inn. We are going off to Java to-morrow. I shall not stay long there, I reckon. It is the rainy season, and hot and misty, as this place is: 79°, 80°, 85° are the temperatures here in my room—morning, noon, and night. Every day it rains, sometimes it pours; everything is damp and sticky; every place that anything can grow in is green. Every place that a frog can float in is sonorous after dark. When the rain pours, the frogs roar in concert with it, and the row is tremendous. A continuance of such a tropical climate causes vegetation to flourish, and people to strip. The trees are clad in vivid green, the people are denuded, black, brown, and yellow and white; quaint to the extreme of quaintness and the verge of decency. In front of my house grow trees that I cannot name. One grows up like a spike, opens and drops a pair of long arms with flat leaves for fingers, and then drops another pair, and another, and another, until it takes the shape of a big fan. I rather think it grew in Hyde Park last summer, but it was small there. Here it is a great green tree, very pretty, and strange to my eyes. Then come betel palms, tall fishing-rods with big knobs for roots, and a feather on top. Then pines stand on the ridges, and look like Chinese pagodas. I strongly suspect that they suggested that style of architecture to the Chinamen. Bananas, with their big leaves, grow in the gardens, and by the sea. Mangroves, with quaint skeleton roots, crawling all about like vast spider crabs in the coral mud, with a

tall tree and green leaves on the back of the monster. I went and sat on one of these claws and sketched, with a fishy damp smell in my nostrils, streaming with heat under a Japanese 'brella. I have not got a fever yet, but I own that I merit one. Yesterday I got a boat at the landing-place, and was paddled to a Malay village on an island. That was a different scientific study of a Pfaul Bauten, and more in my line. A forest of poles are stuck in sand where the water is four or five feet deep. About ten feet above the sea is a grating of planks and bamboos, and rickety wood-work, and the scaffolding is made into a house with leaves and wattle. Inside are mats, and naked brown children sleeping on and under them, and all about on stages are nets and fishing gear, and great tubs full of stinking shells of wondrous size and beauty, preparing for the market. I bought two, and they are pestiferous nautili. The master of this house is a brown Malayman with black hair, who comes alongside steamers and ships, with a couple of boats filled with shells of all sorts, sizes, and colours. They really are beautiful floating shops of red and white corals, and marvels of the sea. But I cannot think what to do with fragile tropical shells, so I have bought none. We got our boat under the shade of a house, and I sat and made a sketch, for which I deserve another fever. Groups of brown Malay children gathered about us on the poles, and piles, and stages. Sampans came gliding noiselessly in, paddled by strange, grave, black-haired, amphibious critturs, who grinned at us with their beautiful white teeth, and presently climbed on and disappeared in some house or other. Then



MALAY PILE VILLAGE NEAR SINGAPORE



colour, and spread out the washing to dry. The brown and yellow stage blazed with more colour. Then the sun got right overhead, and the eaves cast deep shadows on all the walls, while the roofs shone with sunlight on leaves and basket-work thatch. Then it pleased the juvenile population to take a promenade; splash, plump, down came a brown shower of boys and babies, and the green sea about our boat was full of heads and bodies, legs and arms, playing like a shoal of seals in the shallow hot-water. It was over 80°, I believe 85°. Then they got tiny boats with sails, and then a wretch about six got into a canoe, kicked out the water with feet and fins, and paddled away to the sea. I asked the Malayman if his father was a fish, and he grinned placid approval of the joke. Meantime, I worked away, and the result I hope to let you see. It was a hopeless subject, but while I worked I took in the ways of a pile village, and learned how men of the Stone age lived in Swiss lakes and in cranogues in Scotland and Ireland long ago. I was pleasantly instructed, but the sun scorched my feet through my shoes. As for A. he too worked and was warmed, Picture to yourself this venerable form pacing over a narrow rickety plank, holding the cold fishy hand of the shell merchant, and tottering to my fall in pursuit of knowledge.

On Monday, I dined with Mr. Wampoa, a well-known Chinese character, who used to entertain Sir Harry Keppel. Send this to S., and tell her to tell the Admiral that I saw his picture hung on the wall greatly prized. I boasted of my acquaintance with the original, and was all the more welcome. The object of the dinner was to study the Victoria Regia.

Many green sponge-bath leaves cover a long sheet of water in the garden. On Sunday a crop of lilies came up out of the water, and spread on it a beautiful pale yellow. On Monday they were white. On Tuesday we went to the edge of a big ditch at half-past five and watched a flower open; it was as big as a full-sized artichoke. Slowly and gradually leaf after leaf fell back, and gave way with a sudden jerk, and then a burst of perfume spread all around; it was like magnolia scent, but stronger than any that ever I smelt. Then another leaf and another opened, and each scattered a cloud of scent that filled the air. Each leaf got more and more crimson; at last the hard, central leaves in a ball shone bright crimson in the centre of a great white and yellow and purple flower a foot wide. Then we went to look at the pig with one head and two bodies, and the tortoise with six legs, and the orchids, and the China monsters, and the Chinese curios and Jade-stone, and then we dined to the music of frogs. After dinner a servant brought me the Victoria full-blown. I carried him home, and at early dawn I got up to take the picture of my present. I sat down to do a quiet bit of still life; but by the time I had got the flower measured and drawn, I found that it was all in motion. It was shutting-up at sunrise; I had to wash in colour as fast as ever I could, and so I failed to make anything good of the form. Such as I did draw, I hope to show you some day on the fly-leaf of an atlas. I have nothing else big enough to hold my flower. Now it is a purple, drooping, withered-looking crittur, with a red artichoke tight shut about the seed, which is forming inside. I mean to bring home the remains of the flower.

er with those of the shell, and their bouquet will be
tful no doubt.

rop of mildew has grown in my sea-chest, and that I am
going to harvest and dry in the sun, so I shall pause
sed before I write more. Oh the mess that all my
are in! Shoes, coats, skins, everything green with
I put them carefully into a camphor-wood chest to
t them, and this is the result. The smell means sap
reen wood, and this heat has bred a large crop of fungi.
ly, nothing that I have is worth much.

ave fallen in with an Arran man, MacAlastair, who
s Gaelic, and is a ship-chandler. We have fraternized
y; also with one, Dr. A., from Campbeltown, who intro-
himself to me, and set his orderly to watch my door.
is necessary, for this is a den of thieves. We sat and
ed opposite to our doors some days ago. There is a
door which was not well fastened; when A. went into
om again his watch and chain had walked away. There
green smear of paint on the door, which indicated a
t-painter, so the police carried off two Chinese painters
green hands; but the watch has not returned to its dis-
late owner. The police magistrate was driving in a
ge not long ago—a thief came behind, and stole his hat
is head. Lots of other people have been robbed in a
manner, and so I was glad to be protected by a dark
er in a turban.

shall go post this now. I am hot and damp, and all the
h is out of me and my shirts. Good-bye.

J. F. C.

No. XLI.

BATAVIA, JAVA.

Monday, March 8th, 1875.

MY DEAR MOTHER,

On the 4th I went on board the *Nero* at Singapore and after some trouble got leave to dine there. I went to bed, and presently I heard a British voice say, "I want a cabin for (some friends of mine); I go second class." In the morning, there sat the lady to whom I was presented at Lisbon in 1841, reading a book. We had a deal of talk about our friends in England, and about our mutual travels and several adventures. We had strange weather: it was hot in the air—80°, with occasional drops to 75°; the sea was 82°, 83°, 84°, and the sky at night was chiefly lightning; now and then we got under a cloud, and then the rain came down like a waterfall. Some of the men slept on deck, under the awning, but when the first deluge came down it came through. Then they bolted in, and passing an open place got drenched. I slept in the saloon, and there too the water came; I got up to seek a dry place and met the drenched men from above. If they had bathed in their clothes they could not have got wetter. One result of all this sky-pouring appeared in the sea, in the form of palm trees swimming about with roots, trunks, and branches, swept bodily into the sea from some river in Sumatra or elsewhere. They were going north towards Japan, and I was running before the Polar wind which I fell in with at Shanghai. Here I am south of the Line for the first time in my life. I am getting to see queer people and I have ceased to wonder much at anything. I have met a number of Americans, and Scotch-





and cross-bred critturs of all sorts and sizes—Eurasians call them. The Malays are ugly, and affect a dress that partakes of the markings on a snake's back. These are chiefly born here, but they are like the rest of people in America, and Canton, and elsewhere.

That which most interests me is the tropical vegetation everywhere. It is strange and beautiful. But that which I remark in his book I remark. It is all dark-green, but with variety. Flowers there are in plenty, and the air is full of their scent at night; but they do not show in the dark-green. The trees are everywhere; they come right into the sea all along the coast of Sumatra, and the

they made them appear to be growing out of the sea. Every reef and small round dot of coral island is covered with dense jungle as green as the jungle on shore. The sun and the rain together make trees flourish and men prosper. On Sunday we went into a green swamp to hear music and play on a dry place. The rank, beauty, and fashion were there, and I sat on the box of a carriage and made caricatures. In front of me sat a Malay coachman, with brown skin, dark eyes, and black hair, very like monkeys whom I have known at zoological gardens. His coat was sky-blue, his shirt white, round his head was a turban of a general's own colour. Perched on top of that was a ludicrously tall hat, straight as a stove-pipe, with a flat brim, and a gold band and pendant ends. He sat straight as a statue and grave as a judge. In the carriage were Malays, in all the colours of the rainbow. Presently, trotting at excellent time, with his tail on end, a small piebald pony passed past, ridden by a big Dutch officer, doing *la haute*

rode in and out among the carriages in uniform. Then a band of girls in evening dress, low gowns and low shoes, and hair down, black, yellow, and brown, paced along the green grass, and carried me right back to long ago and far away. Then a man in a Scotch bonnet crossed my line of sight, then a lot of young brown Java lads in white, smoking, without hats. Then a Malay man leading a little white Dutch child; then big Dutchmen, with a yellow beard, followed by a troop of children in various costumes, some European, one Eurasian in red draperies, with a brown skin. Then the sun went down, and the clouds turned red, and turquoise grew suddenly dark, and we went home to dinner. There we got Lenten fare, cold comfort, and little of it. "We," by the way, are three just now. At night I slept as best I could, and at dawn I was up and into a marble bath under a waterspout, which is the pleasant time of the day. Everything is span new; the crows croak a new language; a bird is singing a song that I never heard; flies are lit up for the evening, and come and bite me as I write. Impudent dogs, with curious curled tails, trot about, intent on their own affairs, and pay no heed to whistling, and calling, and coaxing. When they meet me they growl. At early dawn everybody came out into the veranda, and sat there in light costume, drinking tea and smoking. Presently, arm-in-arm a honeymoon pair, in pajamas, barefooted and slippered, passed us all, and vanished into a marble bath. When I came out of mine they passed arm-in-arm as before, and vanished into their rooms looking as cool as their costume and their surroundings. Then a beautiful, slender Malay girl, My neighbor, came in, and sat down by me. She came

pajamas, and sat in an arm-chair.' Her man is a
t, with many boxes piled about his door. And here
ile our lot sit at my door and jabber, smoke, read,
gain with Chinamen for boots and coats and brown
soap, and cotton socks, and Japanese curiosities, and
ding. And now I too must go out and do something
ool of the evening with the glass at 80°, and the air
m, and so for a pause. Good-bye.

J. F. C.

CLII.

BUITENZORG,

Friday, March 12th, 1875.

R MOTHER,

On Tuesday, the 9th, I came up here, forty miles by
a bright sun, with the hills clear. I have a general
on of a flying panorama of palms and bananas, and
lds, of a red volcanic soil, of volcanic cones with
ouds and a blue sky, of red-tiled houses among the
, with whitewashed walls lit up by the morning sun,
people with few clothes, with great hats, and bits
about their draperies; and for geology, rolled stones
e size of potatoes. I got in here about ten, and at
as sent for by Mr. Fraser, who gave me a magni-
fread. Then it pleased mine host to introduce me
overnor-General. He wrote, and I went to be pre-
next morning. Then I was asked to dinner. This
s full of West Highlanders, and people who know
mine. Islaymen are all over the place. The result
he Governor-General has given me an order for post
free, gratis, and for nothing, and letters to all the

residents. The consul, Fraser's nephew, is to lend us a carriage, and we are to travel through Java in state when we can start. But that seems difficult. We have been going off ever since we came, and we are not off yet. This is a beautiful place. From my room door I look over a red river, and a plume of cocoa-nut palms, and a forest of tropical trees at a volcanic cone, "Salah," about 7,000 feet high; over the shoulder of it peeps another volcanic cone, exactly like my models. The clouds came down when I began to draw on Tuesday, and the clouds are on the top of the mountain now on Friday. Now and then the cloud covering comes down, and the points of the cone come through the grey blankets which are spread along the hill-side, and turn to grey gauze, and gather into cotton wool and eider down quilts, and then turn to tropical rain, and run down the red river, sweeping mud into the coral sea. It is all very pretty, but anything less like my notion of the tropics I could not well imagine. It is more like Inverary in the rainy season, but warmed up to 75° and 80°, and dark, and damp, and smelly. Every night when the sun sets a single voice in the forest begins to sing vespers in the shrill continuous metallic ringing call of the cicada, or the tree-frog; I don't know which. The single voice seems to rouse the choir, and they chant a chorus which swells to a great roar, and spreads over the whole land. At seven that choral service ends as suddenly as it began. Then for the rest of the night crickets sing their shrill songs, and frogs croak and chatter, the river murmurs, and the wind sighs amongst the trees. Malay folk beat drums, and make music in their houses below, and so the night is soporose. Chirping

lizards live in our veranda, and run about the walls and ceilings. One came down to look at A., and got close to his ear last night. When we turned to look at him he fled up the wall and chirped. Red ants also live in our house. They come up from the boards, climb chairs, and never stop till they get into my hair and clothes. They tickle and bite, but do not hurt much, and I am getting quite used to them. I found a great creature two inches long in my basin yesterday; I took him to a Dutchman, who said "He is not dangerous at all, he is a cricket." I turned him over the rail into the grass, and gave him his life and liberty; no doubt he sang in the evening concert. Then at dawn, or long before it, cocks began to crow, Malays began to knock at our doors, and gradually the whole veranda full of people set into arm-chairs, and there in the darkness they sit, limp and half clad, and sip tea and eat rusks, and generally do nothing for some hours. Then at noon they eat a large breakfast *en négligé*, that is to say, half clad, with their hair down their backs, and then they deliberately go to bed and sleep for three hours. Then Malays knock at doors and distribute five o'clock tea and rusks, and so matters go on as before till dusk, when people dress in gorgeous attire, and go out promenading and visiting. At seven or eight they dine, and they seem to go to bed as soon as they can afterwards. Where such is life, how I admire the energy of those who make money and conquer countries and govern them! Down below in the red river are troops of brown natives in swinging wet sarongs, splashing and washing their black hair, and getting into groups and heaps, and rubbing each other down on the bank under the palms. They are not hard to

govern, I suppose. When it rains, as it does daily and hourly, the naked gardeners get under trees and cast fishing lines into ponds resplendent with *Victoria Regia* flowers and green with their leaves, and adorned with black swans. They never seem to catch anything, but they have hope, and they are happy. The great sights here are a spring and the garden. The spring is cotta-butta, or some such name; it comes out of the broken crater of the volcano and is 72°, because it comes from the clouds and the high grounds. It is as clear as crystal, and into it we plunge, and swim, and dive, all for the small sum of 50 cents. The garden is described by Wallace in his book, and to that I refer you, if you want to know more about it than I do. I delight in it for its beauty. The ferns are in groves, twenty to thirty feet high, like F——'s big fern at Campden Hill, but more flourishing. Small ferns and strange orchids are planted on the trunks, and fresh water purls about among the stems and leaves. I fancied myself an ancient fairy in the bracken, and looked out for white rabbits of corresponding size, but I saw nothing bigger than vast butterflies. A little way on is a banyan-tree. It has great claw-like roots creeping all over the place for a great distance, and a fagot of trunks from which spread gnarled limbs, from which drop more trees and roots, and bundles of grey-barked stems. I mean to go to try and sketch that tree presently, if the rain will let me. Then we came to a whole forest of palms of all sorts and sizes, then to a tree which drops a shower bath of roots in the air, then to one which hangs long cords from the branches with a thing like ginger-beer bottles and seltzer-water crocks at the end. Then we got to getting up trees and to trees with names

as long as they are, of which I know nothing. But all these trees drop seeds and fruits on the paths, and we pick them up and sniff at them, and wonder if they are good to eat. Yesterday I was there with A. He picked up a beautiful pink, red and yellow thing, shaped like a large fir cone. He nosed it, and yelled with horror; I cautiously sniffed too, and was nearly sick. Then it came on to rain, and I sat on the root of a bottle tree under a Japanese 'brella, and glowered and wondered at the Victoria's in the pond. So this wild garden is like a natural jungle, with a river in it, and with distant views of volcanic hills and tropical forests. It is the most beautiful thing of the kind that ever I saw. But for the rain and damp heat, it would be delightful to be lazy here at Buitenzorg. A tiger came to the garden some time ago, and stole the Governor's deer. The country was roused, and the robber was slain. The jungles are full of tigers, and rhinoceroses, and great snakes, and curious game, but at this time the grass is said to be six feet high, and he who sleeps in it has fever. A. wants to shoot, but he is getting choked off; I don't. And now I must go post this letter. If we get a carriage, three mean to go together to Samarang. After that I don't know what I shall do; I will write and tell you. Do you write to Colombo, or telegraph there, for I expect to be in Ceylon at the end of April, and till the middle of May. Advertise in the *Times* as usual. I am sure to get that news at all events. If I do all that people want me to do, I shall never get home, but go revolving round the globe till I go out of the world. In any case I do not expect to get home now till July. This is my portrait: a pair of yellow Constantinople slippers, a blue silk Canton Chinese robe, a head

much as it was when I started; "a general air of refined repose." I have been reading a novel. Now I must go.

J. F. C.

No. XLIII.

BUITENZORG, JAVA,
March 14th, 1875.

MY DEAR K.,

This is the grandest horticultural place that ever I was in. The Governor's garden is described in a book about the Eastern Archipelago by Wallace, the great naturalist; to that I refer you for science.

Yesterday Mr. — came for me at dawn, and took me to the house of a gentleman who has zoological tastes. He had lots of birds; amongst others a couple of baios, they are black with red bills and coloured wattles, and belong to the Corvi. They speak with a human voice and articulation, and beat all the talking birds that I ever heard. The affected woman's giggle of one made me laugh till my sides ached. Thence we walked to the house of Peithman, once gardener to the Governor-General, now employed by Government to wander about the Dutch Indies and gather curios. His wife, a charming old Teniers Dutch lady, keeps many gauze cages full of mantis. There are the famous stick, flower, and leaf-insects. They are dry and green, fresh, withered, and spotted, and like the flower of the plant on which they live; with my nose alongside of them, I could not make certain which was plant, which creature. The old dame pulled them off, and pulled out great wings like those of a locust highly coloured, and then pointed out that the same was coloured like a freshly hatched fly. She pulled out a mantis of green and it

e a stick, as still as a broken twig, with horns and ranged to imitate the branch of the plant. Then it got d walked on six legs with a ludicrous gait, and she l the stick back to its place in the cage. Some she ack on the plant, and each became a twig once more. rigns and leaves feed on plant leaves. The flower eats lies. When they come to feed on the flower, it s on them and eats them up in a moment. There undreds of them, and thousands of eggs, which they to give me to send home in a letter. They hatch hot-houses, but their food is hard to get. It is the of the plant which bears a hairy-red fruit like a chest-The inside is a clear blob with a stone in it. Very out very rare in England. Next we came to a long-monkey of most ludicrous countenance, his back is ped, that he seems to wear a coat and trousers. A ne stuffed was as big as a small boy. Then we came black cockatoo; his bill is long and hooked, but his and throat are wonderful. They gave him a fruit worms in the skin, he cut that with his bill, then he in his tongue, which is split at the end, picked out a with the pincers, turned back the tongue like a small nt's trunk, and then he chewed the worm with his and swallowed it with his inside, gaping all the

The tongue picked the fruit to bits, and the throat ated till the meal was done. Then we got to the s antelope, which is like a small dark-brown or sh eland. Then to whole herds of guinea pigs and er, which are little bigger. Then to cassowaries and cats, and apes, and peacocks, such as the Queen of

Shela might have given to Solomon. Then to shells and corals, and marvels of the sea, to hats and coats, and mats and dresses of these warm isles of the blest and spice gales, among which Peithman wanders yearly. Then we got to a musical box, and sat in a group, like a picture by Mieris, listening to the music. Then we went to the botanical museum, and I wished for your knowledge or more to replace my own ignorance. Thence we went to the garden, and there I knew what I wanted, and got it from the head swell. There are certain seeds which drift about the world. I wanted to see them at home growing, and here in Java they are in abundance. The *Entada scandens* is the big nut which comes to Scotland, it is common here and in Ceylon. One plant in this garden is as thick as a man's body at the roots and climbs more than a hundred yards over the tallest trees swinging like a ship's cable, from tree to tree. The leaf is small, so is the flower, and the pod is about three feet long. I have specimens of the fruit and of the *Mucuna*, which are the brown beans with black bands round them, which are called horse-eyes. Now look to a chart of ocean currents and you will see that two part from these islands, one to flow round the Pacific, the other round the Cape of Good Hope, and up the Atlantic to Novaia Zemlia, where samples of *Entada scandens* gave the name of Castanje, to one lately discovered island in the ice of the Polar Basin. The double cocoa-nut of the Seychelles is another drift seed; here they grow the plant, and yesterday I saw it. In the old days it was believed that the seed grew at the bottom of the sea. A Sultan gave one as a great gift to the Dutch. The palm has

been seen east and west as far as the Indian gardens. Then

to the India-rubber ficus; it drops stems from the and the roots crawl all over the ground, bare, thin things like an eagle's foot, fifty feet long, I suppose. got to groups of tree ferns with orchids on their d to clumps of palms from all parts, and to green, ned creepers, at whose roots grow fungi, which look , and smell so like decayed meat that flies blow error.

ad man talked Dutch, and I English, French, and gos, and with the help of Fraser we had a good

LIV.

SANDANLAYA,

Monday, 15th.

K.,

re we are up in the hills, and in the monsoon. Were it e queer trees I could fancy myself in a warm autumn re West Highlands. The glass is 64°, and the water he wind N.W. A great volcano is in front of me i see it as well as you see Bein Uaish when it rains waterfall has been pouring off the roof all night, and l of many waters is in my ears. This is not my the tropics.

lay we drove up in a grand carriage, which we have ragged gratis by Government horses and buffaloes, order of Governor-General Loudon, which is to frank h Java, as far as we choose to go. If it goes on ke this, I shall take to the steamers, and get to some e. Our drive yesterday was very interesting, and re driven you a gardener wild. Ferns with fronds

ten feet long, and stems twenty to thirty, fill the burns, and overhang their falls, and clothe the hill-sides. Many look like familiar Scotch ferns magnified. Palms, bananas, rice-fields, coffee, sugar, tea, apples, pears, cherries, tobacco, every sort of thing tropical and temperate grows on these hills among the virgin forest. Everything is wet and green, and luxuriant to an extent that I never imagined. The people wear coloured draperies for ornament and propriety, but children and coolies wear next to nothing, or their own brown birthday suits. They wear hats as wide as a moderate 'brella, and carry burdens on poles. Fish of strong odour were going up, packets of garden produce were going down, and that produce will presently go to Europe. We took seven hours to get here, and landed in the dark at a sanitarium. Dr. Bloom is the hotel keeper and medical man of the place. Close to it is another Governor's garden, and sick soldiers abound. Stag's horns are in the veranda, a red waterfall pours into a swimming-bath, and there I swam at half-past six. My comrades snored meantime, and they have just arrived at ten.

Now I must go see something.

FAILTE.

No. XLV.

SUMADUORG, SOEMEDANG, JAVA,

Friday, March 19th, 1875.

MY DEAR MOTHER,

Men should never marry; at least they never ought to travel with other men, so I presume that they never ought to live enough life with a partner. Here we are like the

drawn by Government cattle, rushing about Java as if the deer were after us. "Black care sits behind the horseman," and he sits behind our carriage. I have had to learn Malay for the last week, and I can buy and sell and do something in that tongue now. *Pookul Vrapa*—What's o'clock? *Makanan Ada*—Have you grub? *Roti*—bread, and so on. By my old plan of grinning and saying *Baika*—good, I get on here. People do not get on here pleasantly by scowling and shouting "—you, you idiot! Can't you understand? Bring me the mustard, you cursed nigger—you fool." I sincerely wish that I were jogging along in single blessedness, once more a solitary traveller, picking up knowledge, and enjoying this beautiful world quietly. It is a beautiful world here. The climate seems to be steady at 73° in the houses, or at 65° higher up, or at 85° lower down near the sea. It seems to rain every day, but now that the monsoon begins to end, it does not rain much every day, and the hills are generally clear at some hour or other. When they are not quite clear, the foreground is like a steaming, misty, tropical hot-house, all over the wide landscape. Cocoa-nut, palms, bananas, and tree-ferns are the most striking vegetables; but a gardener would be driven wild by the luxuriance of the greenery, and the variety of the plants. I study the shapes of hills, which seem all to be volcanoes active, or burnt out. I did not go up to the top of one near Bandong. The craters are forest-clad at top, but sulphur smoked below, and there steam and hot springs sputter among crusts of sulphur and cinders. At night a lot of flying-foxes came flapping over the hotel. They looked like great buzzards or owls. A shot at one, but we did not get him. In the morning, a humming-bird came to a flower

at our veranda, and there fed to my great entertainment. At noon to-day a butterfly as big as the bird came and hung over a flower, and stuck his long proboscis in and drank his dram of honey, and flitted off to another flower, and had another swig, and finally he whisked round a bush, and fled to other pastures. He was a grand fly, with long tails to his wings, glittering in the sun like that diamond ornament which is to adorn my spouse when I get one. By the way, I think it would look well in black hair on a brown skin. The ladies of this country seem to wear as few clothes as they possibly can. A "Sarong" wrapped round their waists, hanging in thin cotton folds to their ankles, and a baby-sling over their bare shoulders, make the day dress of women and girls. Children wear nothing but a necklace and a pair of bangles; men next to nothing, and a big hat. They remind me of that Irish family who had one suit. When I go wandering up and down in a market, as I did yesterday, or whirl through one, as I did to-day, I seem to be in a gallery of Greek bronzes come to life, and posed for an artist. But when I try to draw, my sitters put on their clothes, and modestly turn the backs of their heads my way, so that I am forced to give it up as hopeless or shoot flying. At four we are to go to the Post Kontor, and order horses for 2 A.M. to-morrow. The sun rises at six, and we came to see the country. We are in the most beautiful part of Java as I am told, and that is how I am to see it, and the people who dwell in it, all because I was weak enough to join myself to other travellers; and so, as I said before, men ought never to marry, but live and die old bachelors, as I mean to do. That diamond butterfly will have a lot for next generation.



WOMEN POUNDING RICE—BANDONG, JAVA.







eribon, Sunday.—We started at two, and saw the hills
echlight, which was a new and curious experience. A
bundle of split bamboo was stuck up behind, and made
le of light about our glorious carriage. In and out of
luminous sphere rushed "Loopers," brown, active, half-
muscular Malays, shouting and cracking whips, while
wachman fired salutes of cracks about the ears of our
e. Then the drag went on, and we went down derry
a hills in fear of breakages. At dawn we broke the drag,
got down to the jungle which fringes the foot-hills.
keys were swinging and chattering in the tree-tops, and
were buzzing as bluebottles buzz in a hot English noon.
he sun rose we got into the tropical jungle. The forest
made of tall, broad-leaved trees, growing in wet, steaming,
n mud, and the whole plain was cut up with narrow
r-courses. It looked like fever personified, and now and
it smelt horribly of fungi. It is full of tigers, but we
none. In half an hour we got through this belt into an
plain, rich with rice and sugar-cane, and fresh after
orest. But the glass was about 80° at sunrise, and the
a in the air made the heat oppressive. Presently we got
station, and some dozens of brown men and boys dragged
a rich, muddy, broad, shallow river, which we forded.
es by the dozen were wading over with their burdens,
a pretty brown girl sat in the stream bathing placidly
we crossed. Then we got to a bigger river,
which we boated on bamboo stages and a double
dia boat. Men pushed, and pulled, and waded, and
l, and so we got over, and then we stuck for lack of
s. The German postmaster gave us food and benches

under a shed, and then we went off in the heat to a mill. There the owner showed us the works under and after feeding us on water and cigars, sent us back post in his carriage. There we lay under the shed, and till the horses had their rest, and then off we set in here at 8 P.M. in the dark.

I have been to the Post Kontor, and find that I in three days along the coast through rain and flood that I may be stopped for ten hours at some river crossing. If so be I cannot help it. I have telegraphed for help down the road, and at six to-morrow I start (D.V.). I picture to yourself a large barouche, with a white cover over all, dickey and coach-box. A coachman in Malacca uniform, driving four or six horses, as the case may be, in a box, and two or three "Loopers," wild Malays, rushing on the side, leaping up behind on steps made for them, cracking whips, yelling, leaping up in the air, and behaving like maniac running footmen. Four tiny ponies at full gallop, stopping suddenly at the least rise, or rut, or roughness of the road. Then men pushing, pulling, turning wheels, and calling for aid. Small boys, old men and women tumbling out of bamboo brakes and plantain-gardens helping as they can. In the midst, my venerable old man smoking with dignity and perspiring freely. All this in a heat-haze; overhead, grey clouds. A steaming heat of 90°, and a still, hot, leaden sea, with a muddy sky and muddy water; landing-piers built of coral; Malay and Chinese junks, and steamers out in the roads. If you manage to imagine all this, you will have some idea of the conditions of the Government, and the state of the tropics, gratis.

nothing. I don't feel as if it were going to cost me a fever, but it certainly is uncommonly hot work. As targets are set up in the Government regulations, I do it all "with the greatest care." I carry an umbrella, and I drink no stronger drinks than beer.

Now for this house. The master has a Jewish nose, and the mistress also, and black hair. Her daughters are like her. They go about barefooted in white sleeping-dresses, with hair down all morning, and after breakfast of bread and cheese, the house has become a pandemonium of noisy infants.

Good-bye till next letter.

J. F. C.

No. XLVI.

PEKALONGAN, JAVA,

March 24th, 1875.

My DEAR MOTHER,

Poor old F. used to sing a joyous song with this chorus—

" My wife's dead, and I'm a widower,
I'm a widower, I'm a widower.
I'm very glad that I've got rid of her,
Oh ! yes I am."

Here I am, all alone in the midst of a great carriage, in the middle of a great island, in the middle of the great sea, surrounded by volcanoes, and in tropical heat, enjoying fire after Japanese frost. I started on Monday right early, after a fearful night of " Donner and Blitzen " and a deluge of hot rain. I got off at daylight, and made good progress under a fine blue sky in a fresh breeze, admiring the great volcanic

mountain which stands opposite to Cheribon. The name of it is Tjerimai, and it is 10,754 feet high, according to the map. The cone is nearly finished; the crater at top must be quite a narrow basin. As we got on we got to water roads, then to wet roads, then to water, and then to Loran and a big river, where my coachman said, "Brenta," was "Malayman no sabe." I went and looked over a bamboo hurdle, and there was a red flood pouring past, and the royal mail waiting till it ran out. "Rusticus [eggs pecked at] dan defluat annis." I ate cold rice and hard eggs, and drank cold water and tea, and reposed for about six hours. Then my carriage was hauled on to a *Castalia* boat, with bamboo hurdles on it. Men, women, and coolies crowded in, and over I went. Then I had to wait for horses or harness or something, so I sketched natives. Then we got off once more, and drove helter-skelter through floods two or three feet deep in the road. Men were wading breast high in side-paths; the water was deep in the houses. All the population were fishing in their fields of rice. The only truly contented creatures were the buffaloes. I thought of old Greek tales about water-bulls, and decided that *Bos primigenius* must have been a buffalo of mild aspect and great power, fond of water and swamps. There were these great brown and white and mouse-coloured kye, tethered in rows on dry mounds, or standing up to their shoulders in the water or laid down so flat that nothing but a face and a pair of horns or it may be a bit of hump, appeared in the air. In the midst of all this water rose rice-tops, and now and then a great cane-brake; but that forest of reeds was sugar. Presently we got out of the floods, and by eight I was housed at



GROUP AT LOSARI, MARCH 23, 1875.

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Tagal. A ball was going on next to the Belle Vue Hotel. The music was funereal in time, horrible in tune, lamentable in tone. It continued all night, and chimed in with the music of mosquitoes. It was an unquiet, hot night, and noisy. I looked in at the ball, and saw young men in white coats and polished shoes enjoying themselves after the fashion of their age and native country—solemnly. A Dutchman is even more bored by amusement than I am.

On Tuesday I was off at dawn, and I got housed at 4 P.M. at a good place without difficulty. To my right was Slamati, 12,104 feet high, with a crater at 10,776 feet. It is a mountain, in the same state as Vesuvius—a cone risen in an older crater, but not yet complete, like the next neighbour, Tjerimai. The day was beautiful—79° to 89°, with a bright clear blue sky and a fresh sea-breeze. I sat all over the carriage, front and back; got out all my bags, and hung them on divers pegs in divers ways, to try how I could make myself most comfortable and look most like a governor-general. The result was my own great contentment and the awe and reverence of the whole country. Every man I met took off his broad umbrella hat, and passed me with an awed face. I smiled and nodded, and touched my hat royally, and so we got on fast and cheerily all day. The great fun seemed to be fishing in ditches; the great industry, rice cultivation. A lot of buffaloes and ploughs, with men sitting on the wood, march and wade and splutter about in the mud and water till they make a kind of nasty chocolate of a whole field. Then women wade in with bundles of green plants, and stick them in rows with their hands. Close to them are ripe green fields and yellow grain, and the road was crowded with

coolies carrying rice-sheaves to market. They are people, with a strong tendency towards black now. Picture to yourself a naked boy, plastered with mud, riding on a muddy buffalo, wading up to his knee in a stream; or a dozen buffaloes wallowing on a muddy shore by a stream; or three boys in draperies of primitive natural brown skin riding on one white buffalo solemnly down the street; or a whole herd of buffaloes over mud with one boy herding them, seated in the biggest, all standing in standing muddy water, picking pasture out of the slime. Then put in a great thicket of sugar-cane, ten feet high, and men gnawing bits as they go along the road; then put in the smell of dampness and heat, and a glare of light you can hardly bear, and there you have a picture of what I saw it yesterday. Then come to a river-bank, crowded with carts and coolies, and smelling abominably. Then a double canoe stage boat comes in, and the carriage is on board. A pretty girl, modestly covering her face with a wet sarong, is up to her neck in brown water, she goes under, and a cloud of black hair floats up; she comes, having changed her sarong below, she stands, wringing one garment, clad in the other, in mud and water at 85°. Near are men scrubbing themselves, and men scrubbing the hides of grey buffaloes by the river. They are twitching their ears, and throwing a sparkling shower of light out into the hot air with a snort and twitch. Over we go, and a whole crowd take the wheels of my state-coach and sing. I catch it a Gaelic song. The leader gives out a few words

and tune, with a grand voice, true as a Japanese gong ; the whole lot sing "Leila," and haul. Up I go an inch. I come more verses, and at each "Leila" up I go till I reach dry land once more. I pay, and off I go to stick in mud. Down leap the "Loopers;" the coachman yells; the "Loopers" thrash; the horses kick, and do everything but pull. "Loopers" push the wheels. They summon passing coolies; push, and pull, and shout, and at last off we go again at gallop, shouting, "Hoo! Hio! Hoo! Yah! Hurray!" Stamp, crack, crack, crack; and so we travel in with a Government order for free post-horses and a Batavia carriage, which is the greatest imposition of the whole. Here I was told that I must wait five days for horses. I wrote to the Resident, and I am to start at noon for Samarang. This letter is the result of my morning's work at Pekalongan.

Samarang, 25th.—At one I started, took off my coat, rolled up my shirt-sleeves and trousers, and spread myself in the cool breeze, which, travelling on good roads at a moderate pace, blew in my face. After a while we began a rise, and rose 900 feet over a spur of the hills. We got into a damp forest of broad-leaved teak-trees, adorned with orchids, and hung with creepers. Strange birds twittered and sang. Six buffaloes were harnessed ahead of ponies, and on we went. Down came rain, and everything cooled. Then, at dusk, we came to a deep pool in a red swamp, amongst stones of whinstone under green trees. In the swamp swam a whole herd of buffaloes, looking like my idea of hippopotami. Naked brown boys ran about yelling and driving their cattle, and herding the amphibious brutes. It

was a strange, weird picture, unlike anything that ever I saw or heard about. Presently a couple of the brutes were fished out and harnessed, and they solemnly paced up a hill, dragging horses and carriage, while a small boy did all the driving. No wonder "Tarbh uisge" is the friend of man in Gaelic tales. Then night fell, and I fell to feeding in the dark. I made such a mess of it, that I took a swig out of a bottle and stopped.

Thenceforth, till the moon rose, I saw Java by torchlight. After the moon rose, I went to sleep bareheaded, and saw it in my dreams. Every six miles I had to wake up and pay "Loopers" and coachmen, and try to talk Malay. Then I found that I was in a new language, the third which I have passed in Java. Malay was useless, and I was dumb; so I paid, and slept till the dawn came as suddenly as the day went, and then I arrived at the Pavilion Hotel in Samarang. I have delivered my letters; I have seen E——, and on the advice which I got to-night I shall act—either go on wandering, or go off by steamer to Singapore to-morrow.

I have made up my mind to leave Java to-morrow in the steamer for Singapore, and get to Ceylon by the first mail.

Good-bye till next letter.

J. F. C.

In consequence of the break-down of the carriage I did not go to the greatest sights of Java, to wit, the great Hindu ruins near Samarang, and to the scene of a recent eruption of mud from a cone farther east. By the kindness of many friends, I ought to have travelled with ease and comfort, and to have seen some of the most magnificent islands

, heat, overworked cattle, and a broken carriage on shore; my pleasant party on board a well found ship, and down-sloth made me leave Java. The carriage was afterwards and the money divided with the owners in London. people seemed to know the story of the ruins. An old d, Mr. John Crawford, in 1862, gave me a number of nese bronzes with this note:—

This cup—presented by the undersigned to his friend,

JOHN F. CAMPBELL, Esquire,

—was brought from Java in 1817. It is a Hindu sacrificial cup found among the ruins of Hindu temples, and bears the date in figures 1241 of the era of Salna, or Salivana, a prevalent one in Southern India, from whence it was that the ancient Javanese acquired their Hinduism. The era of Salna corresponds with A.D. 79, which, by the way, was that in which Pompeii and Herculaneum were destroyed. The cup was therefore manufactured in the year of Christ, 1320, and is at date of this memorandum 542 years old.

(Signed) “J. CRAWFORD,
“15, William Street,
“January 19, 1862.”

he cup is 4½ inches high, and has the signs of the Zodiac other figures upon it in low relief.

“Bronze figure of ‘Dave,’ consort of Vishnu, the third on of the Hindu Triad. From Hindu ruins in Java.”

3. A figure of Buddha, with an inscription on the the screen under which he is seated.

4. Buddha standing, draped, with a glory behind him, one hand in the attitude of blessing, the other holding a lotus.

5. A bell, said to be of great historic interest.

6. Smaller figure, seated, apparently the same as 2.

7. Buddha, seated.

8. Figure, seated.

9. A couchant monster, intended to pour oil or so from his mouth. He is most like a conventional dog.

These bronzes may indicate the origin of Javanese which I have heard a great deal and saw very little. A gentleman at Samarang told me that a great many utensils had lately been found on his property, which these famous ruins.

The natives looked cowed, but they are proud and avenge insult. A lady had a good servant, and even a guest, who spoke to him rudely. The servant came mistress and resigned.

"Why?" said the lady.

"If I stay I *must* kill that gentleman!" said the servant.

"Nonsense," said the lady.

But next day came the same story, more earnestly ever. So the lady, to save her guest, let her good servant go and he went and so escaped murder.

Nevertheless, I would readily engage that Malacca and all; for a kind word has equal power with a sword in Java. That I say for myself. The ancient Javanese were brave and had a high spirit.

ancient or modern are out of my line, but stories come within my bounds. It is told that an English minister gave away Java, having no notion what the place was like, how big it was, or what it was worth. It is told that the Dutch, having got Java, wished to make roads. A governor ordered the natives to make a road, and threatened to hang the chief if it was not made, and well made, within a given time. Something went wrong, and the chief and a dozen of his people were hanged by the road side. No wonder the Java roads are good, and no wonder the natives looked at me as if I were going to order them to execution from my state coach. I own that I breathed long gasps when I got to the free shade of the Union Jack, away from cringing bullied mortals in damp heat.

No. XLVII. FRENCH MAIL "HOOGHLY," AT SEA, INDIAN OCEAN,
Monday, April 5th, 1875.

MY DEAR MOTHER,

On board of this ship ought to be several letters of mine up to Samarang and Good Friday, March 26th.

On that day I found that the famous Batavian carriage was so injured, that I could not venture to travel in it, even with gratis horses. So I got on board of a ship, and left the country and the carriage. A lot of people are on board, all dressed in quaint tropical costumes. To be in the fashion, I put on a Chinese blue silk coat, and so we enjoyed ourselves, till we got to Singapore on Easter Monday at dusk. Now you may remember your Easter weather, and compare it with mine. The sea-water was 85° to 83°, the air in the coolest

place about 80°. All day long the sky was covered with clouds, which rose up in tall pillars till they got to cool regions, from 12,000 to 20,000 feet up in the blue sky. There they condensed, and down came a plumper of tropical rain. I could see it beginning to fall, falling and hiding lower and more distant clouds. When we got under one of these pillars of cloud the rain roared as it fell on deck, and ran off in torrents into the sea. At night streaks of blue lightning fell, and ran along the horizon from cloud to cloud, and thunder growled. The air was still, and the shallow hot sea calm. While far from land, 150 miles at least, bright tropical birds of the land passed us, and went on their way. When we got near Bangka and Sumatra, the sea was covered with floating flowers, leaves, fruits, and whole trees. When we got near the mouth of a big river the sea was brown with thick Sumatra mud. A strong tide was running west into the Indian Ocean carrying all this drift to be the sport of winds and waves, and to reach Scotland in the Gulf Stream. Arrived at Singapore, I went to a coral beach one fine morning, and spent some hours in seeking for some miles for my pet fairy eggs. I found none, but I found a great lot of fruits and *débris*, which I shall look for when I get home. I found all manner of treasures of the deep congregated and collected and cast ashore in the narrow neck through which the waters of the Pacific and Indian oceans mingle. The coral sand was strewn with beautiful little shells, and with spines and plates of crabs and sea-urchins. I filled my pockets and stung my fingers.

Meantime a stream of coolies and natives, Chinese and Malays, tramped along the beach, each with a bare hide and a

big hat, and a long pole, and a double burden of fish and fruits, and produce, of sea and land. Then came a solemn Indian in a turban, then a black Indian in a white plaid draped about his ebony limbs, then a Malay woman came out of a grove of cocoa-nut palms whose gnarled roots grow in the sea-sand. In another minute she is up to her brown neck in the blue sea washing sarongs of all known and unknown colours of Malay manufacture. Then came a tall well-made Malay papa with a stark naked Malay child. They stopped at a hole in the sand, and the big one began to dig with his brawny hands; no terrier after rat ever dug better. I joined the party and watched. When the hands were at the limit of the arms and the head of the digger was on the hard sand, I said, "Trada," he is not there. "Ada" said the Malay, he is there. But he is there still as far as I know. He is a burrowing edible crab. I saw lots of his work, a fresh pile of wet sand thrown out of a rat hole, with the marks of sharp claws all over the mound. Him I did not see, but I saw his shell. By nine it was so desperately hot that I got into my Malay boat and was rowed back by a Chinaman to Singapore. Another day I went to the races. All races are a bore, and these were no exception, but the spectators were my delight. I got into the ruck among a lot of Chinese and Malays. A little boy beside me had a great gold chain round his neck, bracelets and other braws on his yellow skin—his head was half shaven, and the back of it was the foundation for a long black tail. Fat fubsy Chinese parents, devoid of beards, chattered and betted, and wore felt hats to be European-like. Presently came a bustle, and the Governor's carriages came swinging up to the grand stand. Brown coachmen in red

and gold Malay fancy dresses looked gorgeous. Out stepped my late fellow-passengers, now Governor's guests. Presently they were conversing with the Tumangong. I cowered among the Chinamen, and was not seen, I hope, for my dress was too shabby for such dignitaries. I was asked to dine, but my letter was brought to me at ten, so I could not go. Next morning that party went off to China with F. That evening A. arrived from Batavia. On the 1st of April I went on board the *Hogly* French mail.

I saw Mount Ophir on the Malay Peninsula one day. I saw the high mountains about Acheen yesterday. We slipped through a narrow passage about two, and got out of the still Straits into the heaving Indian Ocean. At six I went forward to "the eyes of her;" and there watched the sun go down into the sea right ahead, due west. It took two minutes and five seconds to finish that plunge.

In 1873, in the White Sea, I timed the same proceeding: and saw the sun nearly north slide into the Arctic basin, and take twelve minutes to hide his hot self under the cold blue sea. Here night fell like a curtain; there dusk and dawn made all the night that we saw near Archangel.

At this moment a very polite officer tells me that I cannot sit in the cabin without my coat, so I must put it on. I had some thoughts of fetching out my Archangel coat to rebuke the absurdity, but being polite I bowed and grinned, and clothed myself; and here I am, with stewards only to look at me, sweltering because of civilization. Drat civilization! The best of it is, that the whole ship is overrun with children nearly naked, and all morning men and women, half-

from baths. Furthermore, our ancestors the apes abound all over the ship, some with, some without, tails. None are clothed, and nobody cares. One has found to his cost that even a tail may be a cause of suffering. Two green parrots have been put into the same cage, and they bite the monkey's tail, unless he tucks it carefully up out of their reach. As it is with that tail, so it is with my coat. It is a bore, but I must wear it. Drat fashion ! Besides apes and peacocks, and gold of Ophir, we have diamonds from Borneo, birds from Japan, cigars from Manilla, and wares from China. Among other curiosities are two Chinese nurses, and a Malay servant, and a lot of Eurasian children of unknown breeds. We have Spaniards, Italians, French, German, Dutch, Britons ; and languages more than grew at Babel go babbling all round the ship day and night. But the chief aim and object of everybody is to get into a windy place, sit still and sleep. Whole armies of convulsed chairs sprawl all over the deck, and in them straddle their owners, with their names written over their heads. I have no chair, so I look out for the best placed and sit there till the owner comes. Then I start up, and beg his pardon in his own language if I can ; and so I have made friends with no end of injured chairmen. One has given me a daily Manilla ever since I thus made his acquaintance. We jabber Spanish at meal-times. He is the picture of Louis Napoleon, Emperor of the French. His hand was nearly cut off in a fight with Manillian natives, and I cut his food in return for his cigars. And now this jabber must cease. I hope to land on Wednesday 7th at Galle ; get letters, and then make plans. I shall stay about three weeks in Ceylon, and then possibly come back.

Alexandria will be a good place to write to. *Times* everywhere.

J

No. XLVIII.

COLOMBO
Friday, April

MY DEAR —

Here I am, sitting at 7 A.M. by the sea with a coral strand beside me alive with land-creepers. The glass at 81°. Fleets of flying prowls are gliding towards the horizon to catch flying-fish, and all quaint crows are making music, with the waves of paniment. It is Laggan strand in the tropics, see groves of cocoa-nut palms, over an undergrowth which grow in the coral sand. I have very few and wish that the bonds of civilization were loosed. I was in native costume. That is, a brown and black day suit, with cotton draperies, and a palm-leaf and a basket cap or a turban.

Yesterday, at 6 A.M., I started with A—— in coach from Galle, and drove about seventy miles shore through a continuous forest of cocoa-nuts, green coral and red sandstone and on greenstone rock. We went at a famous pace in true English fashion, at the difference of horses. In Java we were dragged by six rats or pied mice of ponies, which stopped at Black Malay "Loopers" hung on behind, and "Hoo! loo!" and cracked whips, and thrashed us with cotton. Here a dark Sin

rotted and cantered merrily, and never needed whip or spur. The Javanese looked awestruck and bullied. The Sinhalese look like mild-eyed, marmoset monkeys—happy and content. The naked children ran after the mail and cheered; even the native curs cocked their tails impudently, and barked with British independence. I got down to look at a heap of stones; picked up nothing but the most beautiful specimens of rolled coral; and, when I had got about a stone weight, I pelted the dogs with the precious freight. It was warm, but the air is light and dry. Instead of stewing in Java and boiling at Singapore, here in Ceylon we fry, or grill and dry. We were turning to living mushroom-beds, with green mildew and blue mould; here we feel fresh and clean, and enjoy life. As usual, my chief joys are the people. I never tire of looking at the living gallery of *tableaux vivants*. The men wear long black glossy hair, tied in a knot at the back, and fastened in front with a big tortoiseshell comb. They have black beards, and some have great shaggy masses of wavy hair flowing wildly over their shoulders. The boys and children are often beautiful, and the whole lot are beautifully formed, like bronze Apollinos and black Apollos and Venuses of all the best-known kinds, large and small. Picture to yourself a pair of hump-backed, mouse-coloured bullocks dragging a covered cart full of Sinhalese, all grinning and glittering with ivory teeth and silver bangles and bits of cotton colour, and sparkles of sunlight on their polished shoulders and foreheads. Then place a solemn, draped, bearded black man with European features between the cattle and the cart, stalking along the white or red road with the dignity of an emperor, and carrying a cane for sceptre. For back-ground a maze of

queer, long, jointed, bent stems, with great bulbs for roots, and green plumes of palm-leaves for crowns. Through the forest a bright-blue rolling sea of clear water glittering, and a dazzling, shining white sand, with a grand surf, rushes alongside, and a fresh breeze blows the curtains of the mail-coach aside to exhibit two smoking Englishmen, without coats, rejoicing. Hooray! out rush a lot of black bairns, stark naked, and a lot of brown dogs, barking. Too-too-too goes the horn: away go the ballocks into the ditch. Black eyes flash, and white teeth grin, and so we go on to tiffin. We walk to a rest-house on a rising ground, eat chickens, curry and rice, bananas, beer, coffee, cocoa-nuts, and bread, wash, loll in arm-chairs, smoke, and wish that we could stay there and eat pearl oysters and be Robinson Crusoes. Then too-too-too goes the horn, and off we go to Colombo. By the way, the people on the *Hooghly* named me Sinbad the Sailor. The people at Shanghai named me St. Paul, so there must be something about me which I do not realize. A Chinaman at Canton stroked my beard, and asked if I was seventy. Some washed-out tropical Dutchmen laid a bet, and asked me to settle it by saying whether I was twenty-five or thirty-five. I told them fifty-three. I suppose that I am the wandering Jew. I added: "Sir, I do not drink brandy, and that is why my hair is on my head and my beard devoid of snow, and my aged self able to enjoy life." The rebuked Dutchman took another B. and S., and I joined for good-fellowship.

My last *Times* date is February 1st, which I got at Singapore. I expected to get March 1st here. Besides all these, I have a lot of letters from Mr. Campbell, and a lot of

invitations from a lot of his friends. Further, three other Campbells had my letters, and opened some, and they have offered me houses and horses and hospitality. I mean to go up to Candy, and on to the Sanitarium and George Campbell to-morrow. After that I shall settle what next to do in Ceylon.

Now I must go breakfast, for this is my last sheet of paper.

Ta, ta.

J. F. C.

P.S.—I had just done when a grinning black boy and a basket appeared on the scene. Out of it he pulled a live cobra, and proceeded to play pranks with it on the red tiles close to my bare feet. "Take away that snake, you black devil," quo' I, "or I will shy my yellow slipper at you." The boy grinned and the snake went into the basket, and presently put out his hooded head and began to play pranks again. Fancy the feelings of a greenhorn at having that deadly brute flourished at his bare feet while trying to write to his sister from Ceylon. There goes the breakfast-bell, and off I go to eat, being ravenous.

No. XLIX.

NEWERA ELLIA,
Tuesday, April 13th, 1875.

MY DEAR MOTHER,

I have ascended to the top of Ceylon and the earthly paradise. Here I am, 6,600 feet above the sea, in bright sunshine, with the glass about 60°. Yesterday morning it was 52° in the glittering dew. On Sunday I dined with

Governor Gregory on turtle and strawberries, and he lent me a horse. So at dawn on Monday G. W. R. C. A. and I started up Pedro Tullagalla, and went to the highest point in Ceylon 8,000 feet above the sea. I rode, being old and wise, and they walked. We went through a jungle of unknown trees up a water-course on a mountain path, followed by a couple of bronze statues in red turbans and white tunics. Birds sang to us, jungle cocks crowed all about us, mists lay below us in flat, even sheets, and gradually boiled up into clouds which rose and capped the hills. We did not see the distance and to tell truth I did not care. My eyes were earthward, looking for ice marks, and I found none. I found a beautiful hard, heavy gneiss, which my geological hammer showed to be full of jewels. Garnets I got, and I verily believe that I have got a small ruby. At the foot of this peak is a glen called "the moon plains." There in the washings of the river people used to gather gems. Here also picnic parties used to hire coolies and pay for their hire with sapphires and such like gems. But the strange things of human nature come out here, and so people who dwell in Paradise pay no heed to the precious things on which they tread. I am too lazy to dig for sapphires and rubies, and so are the rest of the Britons and Tamils here located. Everybody is devoted to coffee and chintan and money-making, and they grow and gather and make to good purpose. Having smashed stones and smoked enough we toddled quietly down from the top of Pedro, listening to the birds and tree-frogs, and looking at strange butterflies and bloodsuckers. The frogs keep up a constant clucking noise, like the notes of a wooden dulcimer. They have reminded me of a man whom I went to hear when a child

as a Swiss, or a German, or a Tyrolese mountaineer, in my dress, and he used to take out a small pomatum pot to grease his chin. These preliminaries adjusted, he smote him with his knuckles and produced strange musical sounds, which are ringing in my memory while the tree-frogs and blacksmith are making my ears ring with the same.

The butterflies are beautiful; they look like animated sapphires, and emeralds, flown out of the gneiss of Tullagalla. The bloodsuckers are harmless lizards, with spines on their backs, and quaint, large, brilliant eyes; their favourite colour is emerald green, but when they get on dark leaves they put on olive, and when they get upon the trunk of a moss-grown tree, they dress for the occasion, and change their brilliant garments for sober browns and whites. When they are disturbed in their minds and in fear, they go on mourning and turn black and white. As we came down the brown red path, we disturbed an emerald with a long tail, who had just scratched a hole in the sand to lay white eggs therein. The lady walked off slowly and went to the tree and turned colour. Then she looked round the trunk at us and put on mourning, for we dug up the eggs and showed off the family before her very eyes. The eggs were added to the family of G. W. R., a lot of bright little girls, who dressed themselves in smiles and buried the other family who hatched in the sand and sun of their garden. What the emerald did, I know not. I touched her disconsolate long-tailed tail with my stick, and she went round the tree out of my sight, lamenting. Then we got down to the proposed site of a new house. It is in a grove of Aaron's long, brown, withered things with broad leaves, like the

sunwise, and screwing
sixty feet. Then it spread
to keep off the vertical :
G. W. R. is building in h
and Mrs. C. and two br
drove down to Hackgalla,
Farm." The lake is a ne
G. W. R. and executed by t
a wall at a narrow place, an
the plain, and drowned th
"Gemmers." Baker's Farm
and many of his imported F
have become rich planters
amiable reprobates. With o
shot which I carry in my leg
mishap that here took place
It was much the same as the
catastrophe was the same.
beautiful road in a steep rav
extensive

They are not at all like the stuffed birds of Gould and other artists in taxidermy, who make feathered skins seem to live and fly. Then we went into the garden, which is simply a bit of half-cleared jungle, with stony paths and briars in it. It is a quaint place and a beautiful, and one that would have charmed K., to whom please to send this. We were shown many kinds of tea, and young plantations of chincona, and older trees partially skinned to make quinine. Then it came into my head that the Doctor could not have a better stick, so with the consent of Thwaites and his aid, G. W. R. and I and the curator tackled a small tree, and with a one, two, three, heave, we hauled it out by the roots, and, like children at "French and English," down we staggered with our prize and nearly fell in a heap among the sharp stones. Next we ducked and scrambled into the flower garden, where the amiable Adam of this Eden borrowed my knife and cut a sheaf of roses as big as small cabbages, and lilies, and all manner of things that are beautiful and smell sweet. But even this Paradise has evil in it. "Listen," quoth Thwaites; and we listened to a distant long melancholy howl. "That's the dog," said he. "What dog?" said I. "My dog," quo' he; "I have had him in a trap for ten days." Now in Bulwer's novel of *The Coming Race*, the man who has got into the earth's interior is mesmerized by a boy, and made a live bait for an ichthyosaurus or some other extinct monster, who comes out of the water to eat the man and is shot by the boy with "vrill" and a tube. Here in this garden of Eden is a prowling leopard. "I hope that you feed him," said G. W. R. "Oh, yes," quoth Thwaites; "but I don't give him too much; if I did he wouldn't howl; he tears the sticks to bits with his teeth; I

keep him there for a week or so at a time, and then out for a while." Fancy being a bait in a solitary under a vast cliff, for a week at a time, with nothing but sticks, probably sticks of bitter barked chinee wonder that dog howled.

Over the garden at half-a-mile rises a great t over that, once upon a time, fell an elephant. It i for his bleached head is there still, sticking in a cl footprints of "elks" were among the tea. So Ad named Thwaites, has plenty to do in naming and ta animals. He sits on the hides of apes, and his he tains bottled snakes and frogs, more spirited than the acid bird mummies, and skewered moths. Laden spoils, we drove our white horse up and another hor dark: and then we dined with G. W. R., and walk to bed. I live in a mud-built hotel, with rotten plai the carpet, and live rats in the ceiling, under a pigeons. At intervals, while I am awake in bed gets into the rat's attic, and there ensues a tremendous They tell me that house-snakes sometimes take place, and I listen for gliding sounds amidst the feet. Then a tribe of puppies awake and enter and run scrambling races on the reed mats, and se carpet. Then a distant jungle-cock gives a sleepy c tells me that dawn is near. Then a domestic desc the same kindred gives a different crow, and I th time to rise. But tales of scorpions and snakes in and shoes make one pause. Then light comes, and go to a bath full of clear cold water, and pou it over my head till it aches. A large congregation

next door hear the rush of waters, and gobble and quack madly for envy. Then I get a live bronze, who brings Ceylon coffee, and hard butter, and English toast, and I feed with the hunger of exceeding good health. By that time the sun is over the hills, and I go out and wander till breakfast-time, which here is half-past ten, and liberal at that. By noon the sun casts no shadow. I have just been lolling over a bridge, watching a brace of shining bronzes splashing each other in a clear pool. They kept up the fun for five minutes, and then they dived, and their white soles glanced under water, till their black heads came up to breathe. One head was adorned with long straight hair, like a woman's, the other was like a black mop. The owner trundled it, and scattered shining spray, and surrounded his head with a glory of light and a rainbow. On the bank sat a small crowd of gipsy-like creatures, with pots and pans, and sticks and a fire. Red, yellow, brown, and green garments were on the green grass beside them, and their sleeping-places on the grass were their seats by day. A black, beautiful woman, wrapped in white, looked like an ancient marble of a Roman matron; her hair, dressed in the same classical form, rippled about her classical head. She had silver bangles on her wrists and ankles, and arms; silver rings on her fingers, and on her toes; a necklace of silver; many jewels stuck through many parts of her small, well-formed ears, and a jewel stuck through her nostril. Beside her stood a child, dressed in a bit of string, playing a tune with his fists on a tin can. A tall, black, slender man, with a white cloth round his waist, stood in Hogarth's lines of beauty in the midst of all this gear. Truly those who hold that Adam was black had right

on their side, for here are the dresses of Paradise in this garden of Eden. But white civilization here has ousted the ways of ancient Adam.

I passed a huntsman in the Bazaar. He led a foxhound, a deerhound, and a lurcher by leashes, and on his head was a stable-pail. He took it off, and out came the dark-skinned wild-eyed, smiling face, and black mop of the old Adamite race turned into a vulgar stable boy. I went to church on Sunday, and heard money-making and extravagance and modern ways roundly abused and likened to the late eclipse of the sun. Truly Ceylon is a queer place to live in, full of vices and vice. If it be paradise, it is full of leeches and snakes. I went to walk with G. W. R. and passed the police station. In mud-walled cells behind iron gratings I saw a brace of criminals. One was a man, the other a pretty girl, with a jewel in her nose, and tears in her eyes. What the man had done I neither know nor care—the weeping bronze beauty in her classical white wrappers had run away from her employer, a coffee planter, and for so doing a couple of policemen marched her ten miles over the hills, and shut her up without blankets in a cold grated cell. On Monday a magistrate was to settle her. It is a wonder if the winds of Pedro Tullagalla have not settled on her poor lungs. The whole land appears to be colonized by Scotchmen, and they are all making coffee and fortunes. I am shortly to go off on a police inspecting tour. I have fallen in love with a lady aged ten. She lives with a black, ebony and silver, fat solemn nurse to take care of her, and with many brown bronzes to wait on her in a tiny mud cottage in a garden with a green gate, with pet dogs and cats, and comfort all about

The way here is a steep ascent and a difficult path—the way to paradise ought to be. On Saturday we left the al and palm-trees at Colombo with the glass at 85°, a way engine whirled us along a damp, dark, red, muddy, shly, forest-clad swamp, where rice grows in mud, and and buffaloes wallow in mire. Then we went right up till we got to shelves curved in glittering crystalline ias. We looked sheer down on the tree tops and the red rs and green plantains of the nether world till we got to apola. We changed carriages once, and then got into a sh and a thunderstorm. Then we got to coffee and roses, great masses of white *Datura* flowers, and at last to the of a glen and waterfalls. One was red, another beside was white. "Oh the poor coffee estates," said a pasger. "There they go to the sea." We came to one r which the rains had washed the soil so far that the ee trees stood on their roots out of the ground. Not g mangroves they had died. At Ramboddo of the many ured waterfalls I found a carriage, and grooms, and an rly. I got in and drove in state and in the dark up and er to the uppermost top of the pass. By the smell we w that coffee and daturas, and roses and magnolias, were it us, by the ear we knew of tree frogs, and chirping das. Eyes showed fire-flies, and every now and again a t flash of lightning filled the whole misty glen below. n down came the rain as we went up, and I tucked in my and sat cross-legged on my wooden box, dry and content. all that long tramp I had little to eat but a green cocoa—that I bought from a black-eyed marmoset who had bed for it. He took a knife and at three chops took off

the lid and handed me a brimming bowl of sweet water and cream. I drank and ate, but I am more of a carnivorous and than a climbing, tree-owning, frugiferous animal, so I wished for beef and longed in vain. About four we got to a rest house, and there we got beefsteaks and bitter beer. I ate and drank and was satisfied. Now this will let you know that I am in health, for green coco-nut and bitter beer would be apt to disturb the works of any ordinary clock, and my clock which tells me the dinner hour, was none the worse but rather better. I scratched my hands and bleed considerably yesterday, there is no visible mark to-day. But if I have good cause to be thankful for the greatest blessing of frail humanity, I hear of others who are down with fever and dangerously ill hard by. So the serpents have and hold their footing in Eden still. I am going to a Badminton party at 4 P.M. to make acquaintances and do the agreeable to a lot of European ladies in the latest fashion.

I have nothing to say, and no news. I am going somewhere some day, and shall stay about Ceylon some time.

Meantime good-bye.

J. F. C.

No. L.

CHADWICK LIBRARY
April 2nd, 1871

MY DEAR MOTHER,

My last to somebody was from Newera Ellia where I started yesterday at noon with G. W. R. C. Three bare breechesless men hoisted our goods on their turbans, a town policeman took them in charge; two well draped houzars led up two white steeds, those who had the right kissed each other. I kissed my hand, and off we rode into the jungle. There

Il we went amidst creepers, and leaves, and thickets, on the side of a brawling burn. Sometimes we stopped to look at a strange black shiny creature with a thousand feet, moving in waves on the red path: sometimes at the tracks of an elephant, sometimes at a pile of chips, those of a car-ter-wasp, or at an ant, or at something else. Whiles we walked over gneiss rocks, whiles the path was a landslip, and we got off. But whatever we did we went down from the moon plains, and the barrack plains, and the heavenly mode in which I have been doing nothing for ten days. Presently we got out of the wood to a clearing. Some one had bought Government land to make a coffee estate. The Chinese woodmen had notched all the trees on the low hill, and the highest had played French and English or Russian soldiers with the rest. There they all lay with their heads down hill, on the top of each other. The hunters had gone a step further, and burned their jungle, and so everything was black and red soil. Then it began to rain. Next we came to an older estate, where rows of holes had been dug, and where beds of young coffee plants were cradles of future fortunes. Then we got into a deeper ford and we were wet. Then we came to an older estate where the hill-side was green with coffee-trees, all trimmed to one shape and size. Some in white bloom, some hanging with green berries, some with ripe red cherries, which tasted sweet and pulpy, and contained white beans in paper covers. A white man in a solar hat, or a brown man in a white sheet and red turban, or a long-legged black bare-chested statue of a coolie stood here and there amongst the scenery, doing something. Here and there a neat house

with a fence of Adam's needle and bamboo rail. A smoking lum appeared, and the inmates came and answered our questions in h-less English or in Doric, or in whistling brogue. But all the time it came down, and the rain came down with power, pe hoisted my Japanese umbrella; C. in his uniform and walked. Then we got to more rocky fords wetter than ever in water at 65° or 70°. So we wet stone, ate sandwiches and drank whisky, smoke and studied the geology of pot-holes and contorts. Meantime all the naked men got into a group under an umbrella of divers colours, while the wh grazed, and the rain made everything glitter and was not green coffee. Then for miles and miles w through rolling green coffee-clad hills to "Paten lands, past planters' houses adorned with flowers, an and atees, and bleached bones of deceased eleph horns of deer, and shot-belts. Dandie Dinmont ter out and barked at us, big dogs wagged their tai of coolies, clustered about garden gates under many umbrellas, stared at us. Their wild tom-tom musi through the rain from their barracks near the pulpi Everything looked like peace and prosperity, p growing wealth. Anything quite like the counti saw. Coffee is about as picturesque as a turnip black stumps are the same everywhere. But green house of coffee in a ruin of black stumps r ar as the eye can see, amongst these round gne 'mbrella is something . . . My comrade tells t

about £120 sterling at the best, what it yields at the worst is nothing at all. Land sells for fabulous prices. Mortgages pay 10 per cent. in London quarterly. I have no money and I am too lazy and old to make money, but if the earthly paradise is on the top of these hills in Ceylon, the abode of Plutus appears to be Dimboola and the coffee plantations. Further, I am told tales of beauty, of magnificent mountains, the great western range and of Adam's Peak. - But all that I saw was a foreground of green coffee and withered black burnt jungle, against a grey background of Scotch mist. Having topped a ridge, we got down to a river, and dusk came down on us followed by speedy darkness. From paths we had got to a road by a big river, to lights in houses, to fireflies by the wayside, to processions of Tamul coolies beating tom-toms in honour of something or of somebody human or divine. We passed shops lit up by tallow dips, graves dimly seen by the roadside, heaps of coffee refuse smelling as middens smell, carts with projecting yokes on the necks of their bullocks, against which my white pony knocked my wet shins. All I saw was a yellow road with a figure in uniform and a pipeclay solar helmet, striding along in front of me, All I heard was the roar of the river, and the patter of a falling deluge on my paper umbrella. On we went and down the road jabbering and whistling and making way at three miles an hour, till we reached Craigie Lea rest-house about eight. A man in a tortoise-shell comb fed us with "devil" and curry, previous guests looked at us. We lit a roaring fire of sticks. I took off my wet coat, kept on my wet breeks, smoked placidly, and presently went to bed at Craigie Lea.

Now from the name try to picture "Craigie strive to take in what I see. In front rises a covered with round green shrubbery, amongst black stumps and tall dead trees. That is a co To one side is a group of leaves thirty feet high. Some are whole, broad sap, green, beautiful th are split by the wind to the semblance of pa Some bend gracefully up, some rise and bend lik of feathers; among them, near the stems, hang gre of bananas, they are plantains, growing abou door, where ash-trees and cabbages grow in Sec pigeon-house on a pole is under the bananas, dragged hens of the ordinary kind, and happy have as is the wont of their kind. The rain co splashing, the burn is roaring, near is the bigg Ceylon, which is rearing for me to look at it, a stir a peg. About the house, crouched in sack ashes, sit coolies, waiting to carry our duds to There they have waited, and there they must w weather to mend. The wind comes souging i hills, and waves the bananas, and rattles the do the rain comes down, and the gutters pour i Here I am in a sort of tropical Scotland, wet amidst my clan and old friends, with one Camp to the house of another, near to Neill Gow's est same house with his brother-in-law; surrounded men and Indian coolies, and strangers of all sh black to white, all come here to coin yellow g rown beans grown in ad cherries which men ab.

the Sinhalese hotel.

sheet and the comb, "give me a cup of coffee." "Have got any," said he. "How?" said I, "Planters don't grow coffee at the rest-house," said the keeper, and so I had to drink bad English Chinese tea here in Dimla, which supplies the markets of the world with coffee. What queer creatures men are! I am not going to describe what I saw at Newera Ellia, of the many spellings and meanings. Here I read *Vanity Fair* when I wanted to smoke, and when I went into society I found the very same life which I have lived in London, lived by the very same kind of people. I thought them all very pleasant; they were very good-natured to me. But old Thackeray would have made a *Vanity Fair* in paradise, if he had been there while writing. I had him set me thinking with him up there in "Lanka." We had Badminton parties, and balls and races were just the same. I went to a ball and I danced, but I got blown, and my head spun faster than my heels when I waltzed, so I found a kindred spirit who led me to another Campbell, who can't dance, and we three smoked and drank soda-water till late-time.

Then I went to "St. Andrew's," which is the name of the hotel. Ever since I have been there I have heard the pattering of the feet of swarms of hurrying rats over my bed, on the canvas ceiling, on which also rain drips from time to time when thunder-storms come on. Amidst the pattering and growl I heard a heavy *swish* now and again; my friends told me that it probably was a house-snake or a cobra.

Not long ago a lady was sleeping placidly in her dainty bed, the canvas ceiling burst, something heavy fell and awoke her. She reached out a hand, grasped the bight of a long

serpent, and threw him on the floor. He was 1
 he was a frightened cobra. My namesake in lik
 was fallen upon by a great "ceiling-snake," which
 off his bed. He lay there and roared till help
 a snake was found careering about in terror on
 He too was killed. So now you see, if Ceylon be t
 Paradise from which old Father Adam departed
 serpents in possession; and those who prefer the
 of nature might make Vanity Fair of Ceylon. Peo
 drunk there, and fight and squabble, as they do
 seed of Adam have taken root.

So good-night.

SUGAR KA
Saturday, 24

I have recovered my writing-box, so I finish m
 greater comfort. After writing I went out and
 a grand fall, tumbling over a hard rock into a
 Behind it rose tall hills. On top of a knoll abov
 is perched a bungalow, which belongs, as I believ
 Gow, grandson of the fiddler. He has gone home
 fall was seen through a frame of strange weird trees.
 out arms at right angles, on which grew leaves a
 great tree-fan, and a maze of leaves, and strings of
 at the depths below the road in a green thic
 rocks were clad in glittering mosses, all new to
 were crowned by coolie gardens and houses, ab
 bounds in scant garments stalked and squatted, m

and children, with silver rings on their arms and legs, and about their waists and necks, with gilt or gold ornaments in their ears and noses. Up the glen we looked at Newera Ellia, over the country which we crossed in mist and darkness the day before. Down the glen we looked towards the railway, past the Peacock rock. I tried to sketch, and the night fell and stopped me. So home we went, and dined and slept at Craigie Lea. Next day we were up with the dawn, and off by seven. We rode past the head of the glen with the fall in it, and up the burn of this fall to Lochiel. There I found an old Avranches sketch of my own doing, on which I signed my name for my namesake. His house-keeper's wife entertained us with soda and conversation, and showed Mrs. Cameron's photographs in Cameron's land, and lent us a coolie. Under his guidance our train wound up through coffee hills, wading muddy burns cumbered with logs, up we went till my glass marked 25000. Then we got over a gneiss ridge, and down we went to the carriage-road in Dakoya. A shed by the way-side covered a couple of stone crosses, and a mound of red clay. It was a Christian grave. G. W. R. sat on it, and I sat beside him; there we lunched. Then we got into the carriage, and drove down to a police station. I ate bananas, and got a lesson in Tamul from a man in a white sheet, who had an English grammar. Meantime the police were inspected. Then we drove back to our sepulchral dining-room, past it, over a hill, and to a rest-house. There was a jockey with a broken-knee'd horse; a track of blood was on the pavement. "What is that?" quoth I, to "Apples" the keeper. "Gentleman's leg," said he. A leech had got hold of a living meal. Then on we

drove slowly, down a valley, passing coffee in all stages of "shuck," and "gone out." We have got to the last stage of coffee planting. We had seen hope and fruition, but we had got to decay and ruin. A man had paid £500 to another to take his land. The green trees had turned withered sticks, and the ground was a garden of red, orange and purple flowers. These were the bloom of a garden which some governor's lady introduced to the society of Ceylon plants. Like the foreigners of human kind, it spread and multiplied, and, being useless, it flourished, so that the natives are nearly smothered all over the island. We journeyed on till we got to a gap and a station, where two British policemen were put through their exercise by a brown giant. Meantime I sketched Adam's Peak, which peered over the nearer hills, due south. Then on we went slowly in the cool of the evening. "Hi! there's a snake, and a big one," cried my comrade. "See how he goes up that wall of rock!" Down he leaped, whip in hand, swept down the snake, pressed him into the grass, nipped his neck with his finger and thumb, and presently the brute's gaping mouth was presented for my inspection as I sat in the trap. "You got a knife?" said he. I produced my pet pen-knife which is for all manner of domestic uses, and, before I knew what was up, the point of it was poking for the snake's fangs. Then, as the snake was somewhat hurt, he was released. How I did scrub and wash and polish that knife, and then I put it into earth and sand! I am not quite comfortable with it in my pocket even now. Meantime feet had got into the mud again, and got possession of the road. Great black clouds of smoke and steam were rising from the engines, and

bled him; I did not know it, but they had got me also. When I went to bed, I found thick worsted socks stiff with my own gore. By dark we got to a swarm of glorious fireflies. When we got to lights, I doubted which were the candles gleaming through the trees. Then we finished thirty-four miles, and stopped at Nawala Pitija, a railway terminus. We dined with many planters, speaking in all manner of English dialects of coffee. From sheer mischief I waited for a pause, and then shouted clearly, "Boy, give me a cup of coffee!" "Yes, sir," said the boy. Dead silence followed, but no coffee ever came, and I, grinning, went to bed on a couch. I was awakened by the swishing of something heavy on the ceiling; I asked if it was a snake, and the answer was, "Very likely."

Yesterday, Friday, we drove alongside the rail to Gampola Station. It was a beautiful morning, and the country was beautiful. Plates of mica shone like jewels when the rain had washed the red banks. Native coffee flourished amongst the tangle of weeds and flowers which mark the garden of the sluggard in this fertile land. Jack fruit, queer rough green egg-shaped things, stuck on their trees, each as big as a man's head, and good provender for those who like them and don't mind evil smells. Fruits, palms, bread-fruit trees, all manner of leaves and plants that I have seen grown painfully under glass at home, sprang rank and luxuriant by the road side amongst green grass, and guinea grass, and water grass, and jungle. The river, whose birth-place is the top of Pedro Tullagalla, now a well-grown brawling stream, red with the soil of coffee estates, tumbled over gneiss and through banks of red earth beside us. Now and then a

cobra was spied and hunted and escaped; then it was a white ant's castle that had to be stormed and broken; then it was a whole swarm of gorgeous butterflies that hovered and flitted about the flowers; then a long-billed toucan crossed the road; then a long-tailed mongoose ran over it, and so we made ten miles in about four hours, to rest the horse and amuse ourselves. We fed gorgeously at the rest-house. Then C. went to his station, and I dozed in a chair till one when we took the train. We got out at a police station. The men did their drill fiercely. I sat on a bench and tamed a black urchin dressed in silver bangles and nothing else. He crawled to my knees and poked at them with his black paws, for all the world like a hairless ape, with brown beseeching eyes. In another hour I should have been one of the police family. Then on we went to the great Botanical Gardens under charge of Mr. Thwaites. A small copy of the great Arthur Duke of Wellington is that excellent little man. He gave us tea and bread and butter, and beer and fruit, and flowers and vanilla, and he walked us for miles about his joy and care, the garden. He is charming, polite, instructed, intelligent, full of fun and knowledge. Everything about him shows care, understanding and good taste. The place is in a loop made by the river. It looks as if nature had made it; but peeps of the river have been carved out, views of the hills have been framed in thickets of bamboo and palms, and the whole is like an English park, saving that all that grows grandly here would need an English hot-house to make a twig sprout. Here were nutmegs in flower, cardamums, vanilla, bamboos yellow-stemmed and green, three feet round the stem—fruits from all hot

ses, creepers crushing trees with their vast weight of enery, groups of rare palms, thickets of ferns, devil-canes, ans, every fruit that is good to the taste and pleasant to eye, and that serpent in the garden together with the shes to prove that Eden had come to grief.

The other Campbell hunted the snakes, Thwaites and I pped leeches off our legs, the devil-cane nearly poisoned an who pruned it and happened to put his knife into his uth. Presently I was aware of a lizard with horns on his d standing on a tall tree; he had a red and orange pouch ler his chin, which he blew out like an angry turkey-k. G. got him by the skruft of the neck, and he kicked l scratched and gaped to show white teeth in vermil- i jaws; he was set on a white umbrella, and there he od panting and fuming and puffing as bold as the evil t. Then the little dragon was set on the gravel, and after a use he went into the grass amongst the leeches, and walked his tree as if nothing had happened. Then we got to the lge over which we got in, and to the strange, flat-edged, eping, crawling alligator roots of india-rubber trees. There shook hands with the Duke of Wellington, and departed n this sweet place in the dusk. C. made me go out in dark to look at things, which to me were invisible. He w where they were, and saw them with mental or with ily eyes. I smoked.

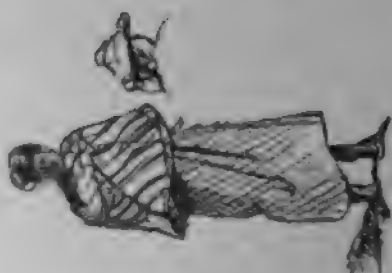
This morning we have been walking for miles in the vernor's grounds, up tall hills on fine gravel walks among hrubbery of hot-house plants. We broke the cover of a ite ant's castle to see the brutes at work. They are little ite, soft, translucent beings, like bugs with red heads, and

they were exceedingly busy building under their roof. When it was broken a furious active red warrior of a shape like his fellows at home, rushed furiously into the crowd, as a robber chief might pounce on a swarm of sheep. Snap went his jaws on the soft white back of a white man, and down fell the crippled architect grievously maimed. He danced the warrior, nip went his jaws and another man sprawled. A dozen were kicking in a moment. They spread somehow, and a horde of red ruffians swarmed through the breach which we had made, dealing death and confusion. It was a furious inroad on a peaceful city, the horrors of sack and rapine. Then the victors looted the dead, and carried them off to eat them, the horrors of cannibalism. They made me think of my fair cousin going to the Islands. When I got home I read a letter from the lady from Galle. By this time she is half way to Colombo. And now I must stop, and go see something else. I shall be here for a while and after that I am going elsewhere. I shall have no letter by this mail. Possibly you are writing to me. As I have not been summoned I shall not hurry home.

Anything less like Kandy of my dreams than Colombo in fact cannot be fancied. I looked for elephants and brocade and grandeur. I see bony steeds, rattle wheels, white sheets on black skins, and a muddy stream behind a "Bund" which is the famous "lake." It is a bright hot place amongst green hills, full of Scotch and coolies. But the Princesses of Serindib and jewelled palaces are in the *Arabian Nights*.

And so I close, and all well and well pleased.





No. LI.

DAMBOOL,
April 29th, 1875—Thursday.

MY DEAR MOTHER,

The last clause of this name ought to be spelt *het*. We started from Kandy yesterday morning at 7, and made 45 miles by 8 P.M. We drove up for some distance in a coach and pair, and then down to Mutale where Mr. W. gave us food, and *Jon Duan* to read. I liked the bodily provision best, for I was hungry, and the other stuff was sour and nasty. The morning breeze was cool and pleasant, the roads good, and the country quite beautiful. We drove up one burn, over a watershed, and then down northwards by a river which grew a little and then dried up. Palms, Bread-fruit, Jack-trees, coffee plantations, flowers, birds, and butterflies, made the sharp hills gay and pleasant to look upon. Dark draped turbaned men stalked along between bullocks and carts with the air of emperors, and flashing mild dark eyes. Black and brown beauties with silver and gold and coral on wrists, and arms, and necks and ears, with white sheets round their shoulders, and coloured edges, with bunches of white and colours for bustles, and bare feet, sat breaking stones by the way side, or carrying earth and gravel in baskets of classical shapes. They looked like Greek marbles, Caryatides or such like, or living bronzes partially attired. Strings of newly-imported Tamul coolies met us, marching to earn small fortunes in Serindib, other strings of them laden with their scanty earnings wound along the yellow road on their way back to Adam's Bridge and India—of them one with a

grey head and a white turban met us this morning. He knelt, and put his praying palms together. Then he lay flat on his face, and stretched out his arms and palms on the road. He had "a complaint;" I thought he wanted physic but all he wanted was aid. Some of the stone-breaking road makers had stopped and robbed him, and broken his head last night, and he wanted two pounds odd, which he had earned in as many years. His head was felt, and the stout Malay policemen were sent off with him on the spot. Once more if this be Eden, the serpents hold their own in Serindib.


By dawn we were up, and by sunrise off to the top of a great rock in the jungle on which are a lot of ancient tombs and temples. The rock is gneiss, much contorted and very glittering and crystalline. It is curiously round and very like glacial work. All the way up we found pot holes in various stages of growth, new and old, small and large, and just below the top we were shown a considerable pool in a rock basin. I was geological puzzled, and began a serious hunt for icemarks. At the top, from the tip top, 350 feet or so above this rest house, I looked out over the country eastwards, and saw a great green plain reaching to the distant sea with rocks like islands in the green forest. I saw, or thought I saw, an ancient sea bottom with the old islands in it where the waves had left them. As for the pot holes they clearly are the work of rains. No rivers flow down these rocks at this season, but little more than a week ago 10 inches of rain fell in a day, and each of our heads was the source of a stream. So this rock now

have been to the top, is seen to be the source of many local rivers which pour down it in thin sheets, leaving tracks of washed rocks with pot holes and sand in them. That part of the work done, we had time to listen to the barking of deer below us, and to look at strange cacti and the holes of ant lions in the sand. These beasts live in the sand, and at the bottom of a small conical pit an inch or two in depth. When any unfortunate insect gets in and tries to struggle out, the lord of this cellar throws sand at the victim, knocks him over and when he gets him to the bottom, he comes out of his den and dines. A shorn priest in a sheet of yellow cotton, draped like a Roman Senator, was our guide, and when he stood in the wind on the top of the rock he was a grand picture. "Take care," he said, when G. C. went into a rocky hollow under a cliff to look at ant lions, "there may be panthers in that hole." There are elephants in the jungle and snakes everywhere, and white ants' castles rise everywhere among the greenery. Somehow one gets used to the idea of all these living pests, and the reality of them is not so bad as the idea. A leech-bite or two, and the occasional drone of a mosquito is the worst that has yet befallen me. We came down from the top and got round a corner through a white gate, and we were on the threshold of a temple as old as Buddhism in Ceylon. The priests say that it is 2,000 years old at least. For all these years the rains have been working on the pot holes—for how many more, who is to say?

The temples are small copies of Megaspelion in Greece, where I was some thirty-four years ago. The waves of the sea or the S.W. monsoon, and Father Time, have hollowed a

great cave under a bed of gneiss. The under side of is the long sloping roof of a series of large chambers. The low white wall with posts and doors and window verandas and steps make the front walls of all these. Inside they are so dark that I had difficulty in seeing one a great figure of Buddha is laid on its side with its head under the head. The figure may be forty or fifty feet high. I did not measure and don't care for statistics. The surface is white and polished, and may be mud and straw as a plaster. Our priest said that it was carved out of the rock, but the roof has been broken upwards like a mine to make a light. I looked for tool marks and saw none. The whole figure has the rounded form of an ancient weathered statue. It is all painted in gorgeous colours. I sat me down on a step, lay on my back, got K's gift to bear, and started sketching designs. In one large chamber a Buddha is seated on a kind of throne with rows of seated disciples to his right and left. Some are dark, some red skinned, some yellow. Some have glories round their heads like pre-Raphael saints. Some are pre-Raphaelite, almost Egyptian in their stiff and hard lines. Amongst them, at the feet of the main Buddha, kneels a little figure who is to represent himself praying to his predecessor that he too may attain the rank. Behind the main figure is a temple facade with golden ornaments rising in a series of columns and architecture towards the door, on whose step I lay back glowering through an aluminium glass at the main figure. The big figure has a big and very elaborate glory behind it. Possibly it may represent some kind of screen. In it are flowers and scrolls, and rows of sacred geese, Hanse

each side in a semicircle walking upwards and well drawn. They come out of a wild human face, and one with ears and ornaments is in the middle over the head of the main figure. The whole has a mystical meaning which these bright-eyed, yellow-skinned and robed priests know well, but alas, I cannot speak Tamul, Pali, and Sinhalese, which they can well. In another painted chamber sit many figures in grim repose. Some are Lords of the Sky, Angels who brought the Scriptures from Heaven, Kandy Kings, and all sorts of creatures. One made of wood stands by a window in the court dress of his time. Above him on the roof are a series of pictures, and they, by the aid of the Malay Sergeant of Police, and the Priests, told their story pretty well. In one compartment is a ship under sail passing over a sea of vertical waves, out of which many great white fish poke their heads as if they were peeping out of blue bags. The legend, filtered through Sergeant and Priest, is Viji Raja and his 700 *Yodin* (giants) coming from India to Ceylon. "Oudh men of course," said G. C.; "Nay," said I, "hito is a Jap' *man*, yætte is Norse for giant. If these be Oudh men, then Odin and his Norse gods came from India too." A neighbouring picture shows the king and several giants marching over the land. Another, the king seated under a big tree in state, telling his giants that he will give them the whole land to make into paddy fields. Near that is a girl spinning. The king had found the daughter of the King of the Demons, Yakshana or Diavoletta, spinning. In the next compartment she stands entreating before the king with joined palms, and he with golden sceptre or sword threatens to slay her. She says, through my language filter, "If you send your giants to take the land, the



Yakshas (or demons) will kill them. But if you w
me I will save them." Near that is darkness, a
thicket of lotus leaves and flowers, and the hea
turbaned giant to indicate that 700 are hidden
demons by Diavoletta in the dark. Then a little w
sarong and little else, Mian Chuana, the Yakshi
letta, stands with clasped palms before a tall digni
personage, striking an attitude. Two fingers of his
are held up to bless her, his right holds the golde
over his shoulder at slope arms, his toes are pointed
and he manifestly is well disposed towards the litt
damsel who has saved his 700 giants in the lotu
"If you will marry me," she says, "I will help you
the demons." Next to this design, and next to th
image, is a strange sprawling white steel, *Falaise* a
call her in Gaelic, prancing about with the king
lot of headless black trunks, decently attired in t
dress of this country, and with several heads rollin
the place. All the heads have curious long nose
same cast of face which is very unlike that of the
his giants. "She became a Mare," says the pri
helped the king to kill the Yakshas, and he married
that was the first king of Ceylon." "I daresay it i
true," said G. C. "Probably a lot of Oudh men w
over to Ceylon, and their leader married the daugh
chief of the Veddahs and took the whole country."
said I, "I know of a Gaelic story in which a lady
self into a gray mare, and helps a man to slay
people, and escape and conquer a kingdom." And
story of the "Master Maid" in Dasent's translation

tales founded on the same set of incidents, in which a "gray mare is the better horse." In short, here on the top of the Dambool rock I have tasted blood. I have got on the scent of my quarry. I have got out of a yellow-robed priest by the aid of a brown black-haired Malay policeman, the pith and marrow of a popular tale which I have listened to over the peat fires of Barra. I got another of the kind in the middle of Japan from a picture, and an interpreter, and a Shinto priest. In Scotland it is the Prince of Norway and the Princess of Ireland. Here it is the King who comes from the sea, and the Princess of the Demons on shore. In Japan it was the aunt of the first Mikado who was rescued from the Dragon with many heads. But in Barra, Japan, and Ceylon, at three ends of the world, the very same myths are fathered on the fathers of the conquering people and on their little demon mothers. We went on to the door of another temple, and there on each side stood quasi-Egyptian figures with serpent hoods. One big cobra looked over the head, four on each side completed the hood. "Naga Raja," said I, "Naga Raja," said the priest, and we looked into each other's eyes and understood each other. Language is but one of many ways of talking to another mind. We went into the temple, and there stood Buddha himself with a hood of three painted cobras above his white-washed and painted body. "The cobras made a hood for Buddha when it rained," said my filter. St. George and the Dragon, Eve, Adam and Eden, Fergusson on *Tree and Serpent Worship*, the Dragon myth, and all that I have thought and written about that strange world wide myth ever since I began to think about it, came trooping through my brains. I had enough, I was horribly

hungry and hot, and so I bade the priests and their temple "Good morning," and came back here to feed on chicken curry, and ripe plantains, and tea. Since then it has been so fiercely hot outside that I have not dared to face the sun. Hence this letter.

I got your *Times* of April 1st on Tuesday.

G. C. sends his love—chin chin.

J. F. C.

No. LII.

ANARADHAPPOORA,
Sunday, May 2nd, 1875.

MY DEAR MOTHER,

It took us two days to drive down here. Our chief incidents of travel were an elephant and a squirrel. The first is a Government official and works on the roads. We stopped, and he made us a polite bow, and stood on three legs and hopped, and rumbled his inside, and blew his nose, and showed his politeness in other ways. Then he went to work. Some black men in the costume of Eden were rolling great stones with iron levers to make a bridge. Their four-footed comrade got down on his knees and put his nose against a big block, and rolled it over and over, grunting till it was in its right place. Then a double chain was got round a bigger block and the workman straddled his legs over the chain, till he had got the collar to bear. Then he hoisted his trunk in the air, and set up a roar, and set off at a quick walk dragging the stone after him. When he got to a heap of mud he got all his four legs together. When he got to a mound of mud over it looking like a big man, and in baggy



WAYSIDE SKETCH, CEYLON.



breeches. But all he did tended to the right end of his labours, and the stone slid and bumped into place beside the rest. Then the beast made us another series of salutations, and I gave his friend the conductor a shilling. The last we saw of the elephant, Gunputty, was standing under a shed eating a heap of leaves; his back was well dusted with mica sand to keep off flies, and his great broad ears played punkah. We lunched with C. the road officer, and left him and his live stock in their forest camp. We got to a ruinous rest-house. There were bottomless chairs and couches, a bare table and nothing to eat. With sticks the couches were mended and thereon we slept in the veranda among the mosquitoes. Two hens were got and slaughtered; curry was made, and we sat on the chair-frames, and fed sumptuously and slept soundly.

In the midst of our operations a small gray squirrel came twitching his tail over the grass. He leaped up a tree, sat on a branch and looked at us. He got on a broken tree end, jumped to the trunk, whisked round it, and played bo-peep with us for half an hour. Then night fell, and lizards began their games—chick, chick, chick, was their song. They crept up the posts, ran up the walls, caught flies and ate them within a yard of us, and finally disappeared in the roof and the darkness, singing chick, chick, chick, the requiem of the hens. Then an owl took up the song, and the mosquitoes sang chorus, and then I fell asleep and dreamed that I was going to be married. What a terrible stew I was in at 4 A.M. when I awoke to breakfast on plantains and tea, and chicken curry cold, and start in the dark. We dawdled on for some twenty miles through the jungle to this city of

1. The first step is to identify the problem or question that needs to be addressed. This involves understanding the context and the specific requirements of the task.

Here we are lodged in the house of the Resident Commissioner and windows open all day and night, in verandas and luxury. Mosquitoes sing at night and frogs and crickets sing day and night in the garden.

and

where μ is the Möbiot function.

It is not known whether





NAGA ET ANAGATHASPODA

the veranda, frightens me now and then with a crack like copper cap. It has just burst a pod, then the winged cotton-like seeds fly out of their prison and fill the air with shining white stars. They come into the veranda and roll about there; they tickle my nose and hands, and get into my mouth and my glass and paint-box; and then comes a puff of south-west monsoon and the whole flock fly off with the wind to play games with the birds and crickets among the ruins. When I awoke this morning my room was full of wings. They fluttered and whirled outside of my net of gauze, and I dreamed of angels. I awoke to the knowledge that a roomful of bats were hunting mosquitoes. Then I blessed them, and slept till the light came and the bats went away. As I sit here writing I look down a long green vista with a spire at the end. It might be a village church in England but for the humped bullocks that are browsing and the long-haired Sinhalese who are walking there. On each side of the glade are ruins. On one side is a Dagōba, said to be 40 feet high. It was a dome of solid brickwork with four minor chapels in a great square court. Outside is another larger square, grass-grown but paved. The whole was built some 2,000 years ago over some sacred relic. Good Buddhists have subscribed and repairs are going on. But the cricks have become earth, and trees have kicked them down and fed on them. So the dome has become a green conical hill with raw, red brick sides showing here and there. The retaining walls were buried and pushed out of place, but the sculptures were saved from the weather under the rubbish. They have been dug out and the walls are being mended and set up. There are Buddhas, and Rajahs, and dwarfs, and

demons of marble and gneiss all over the place. Whole rows of elephants' heads look out of the walls, which seem to support on their patient backs and bended heads. Seven-headed cobras under umbrellas of honour stand on the side of the smaller chapels. Every here and there is a group of square stone beams leaning various ways among the tops of tall trees. There stood a house, and these were its pillars. Sculptured pictures of the houses are on neighbouring slabs. Long inscriptions tell their tale to those who read them. At the door of each house is a "moonstone" or a half-circle sculptured. The centre is a lotus; the inner ring, sacred geese; the next, scroll-work with bird flowers; the outer half ring (Pop—There goes a pod!) a procession of elephants, horses and humpbacked kings. And all the details are real works of art. They are the "Indian" sculptures that I have seen. There is something Egyptian about the figures, something Italian about the tracery. This city was about eighteen miles thick in every way. Now it is jungle, jungle and red ruin over the whole area, except at a few chosen places of pilgrimage. Here is the sacred Bo-tree. It was a branch taken from that Indian Bo-tree under which Buddha died and attained Nirvana. It was planted 2,600 years ago here, and it is without a sign of decay flourishing still. Last night there in the dark. Inside the railing stood yellow-robed priests and pilgrims from afar, each with a tiny lamp burning like a firefly. They were burning camphor and offering rice to the sacred tree, and giving coin to the priest as men did when this was a populous city and the mounds were gilded domes. It was a strange weird

best worth seeing of any Sinhalese sight that has gladdened my eyes as yet. All round the Dagöba are fluttering flags and stone chapels for pilgrims to offer at, and all this has been going on ever since a city as big as London was abandoned.

The Tamuls came in from India, and the last of the ninety kings skedaddled. Nobody looked to the walls of the tanks and so the country became the wilderness through which Great-Britons are driving roads. "*Bang!*" there goes a gun followed by a tum, tum, tum. On a place which would be the village green of the Bazaar, a reset-up two candlesticks of brass, eight or ten feet high, with a brazen copy of a dagöba, a lot of flags and mats, an altar and the money-box. These are offerings to the shrine of the Bo-tree by rich Buddhists of Galle. They are on view for pilgrims and their pence. I once read a whole series of Buddhist tales, and I saw that the best way to Nirwana through heaven and earth was through a priest's bag. The merit that met its reward in all these tales was charity to priests and self-denial. Bang goes another gun! And now the fierce sun, who has been glaring on all this tree and serpent worship ever since men abandoned the worship of the sun and Indra, is getting lower in the sky, and less terrible, so we are going out for a wander in the ruins.

Two letters will go together, and I and my sketches will follow them soon.—Salaam.

J. F C.

No. LIII.

DAM
May 6

MY DEAR MOTHER.

Last night I slept on a couch with all the windows open. We sat in the veranda and lizards of divers sorts running up and down and along the beams. One mottled fat puff has the reputation of being more deadly than a snake. He did not keep me awake. But when I was going on my shoes this morning I saw somebody sitting under the heel of one shoe. He was a house toad, and I stepped off round a corner, into the sleeping-room of the veranda. Presently there was a hooroosh in there, and I was summoned to look at another creature. He was a small crab, with pointed feelers 3 or 4 inches long, with eight legs, of which he carried one pair towards his mouth. They were armed with fearful claws. The owner ran forwards and backwards, sideways with marvellous agility, and he was a grueful fellow. He was caught and imprisoned under a tin sheet of paper. Chloroform was sent for, to the coolie hospital, but none being forthcoming, the spider was finally slain with a stone. He is a very rare spider, happily for flies. Malabar pheasants, other pheasants, crows, are whooping all about this rest house, and are alive with chirping crickets and cicadas. What a lack of company in this Ceylon jungle. I spent the day in cutting sticks, and a coolie is off with a bunce on his head. Those which I sought are thorns. The spine-

inches long, and grow in pairs alternately at right angles. Consequently each stick has 4 straight rows. From other horns of longer growth grow smaller thorns, and still smaller horns, the grandchildren of the family grow from these. When I stuck my head into a bush, the whole thorny clan stuck into me. I had a policeman with an axe, and he took the offenders into custody, and cut their career of crime short—to the length of a walking stick. Then I amputated the smaller offenders with a penknife, and the docked criminals are to be transported to London bound with cords of coir.

Destructiveness is human, so we destroy. The night before we passed at a rest-less house on grass and sticks in the open air. At sunset a troop of jackals set up their howls and sang, "Dead Hindoo, dead Hindoo—where, where, where—here, here, here—come and eat him, come and eat him." I recognised the words and the song, though I had heard it for the first time in the forest. I thought of P. and his keeper. I got a jackal for his special ends, and next morning he came to see his acquisition. "Well, how is the jackal?" said I. "I think, sir, he must be ill," said the English keeper. The poor beast howled so last night that I sat up with

had five o'clock tea with a charming lady; her husband was a surveyor. Her house is a shed on posts with walls 4 feet high and the rest air. A pet monkey was hanging from one post, and another was up on the top of a tree with its pouches. After a deal of coaxing he slid down a rope and was captured and embraced. It was queer to see black phiz among white muslin, near fair cheeks

while his black paws held on by a gold chain, and dangled beside a silken sash. Lady, pet and her dark-skinned half-naked servants, tea and cakes, from home in the jungle were incongruities. But to be found all over those colonies on which the British sets; where brave women fight gallantly by the side of Britons in beads.

Yesterday we lunched with young C. and M. engineer. We fed on hare, and curry and rice, and of the glacial period to cool ourselves. A deer big as a rabbit ate leaves on the floor, two terriers devoid of tail made eyes at the deer. A big sleep the gift of the lady in white muslin, would sit in vacant chair and go to sleep. A monkey in a basket top of a pole suggested a photographer focussing. Black masons were whitewashing a yellow mud building a bathroom. White ants and creepers walked about the roof, and the elephant was now working on the roads as before. A tank, said to be alligators, was dimly seen through the trees. At the G. C. has brought in from the bathroom a cinnabar with a green and yellow belly and bright eyes. On the table before me, puffing and blowing and with throat, a most ludicrous private secretary. Then hop, hop, to the other end of the dining table, and making for my tobacco bag, under which he is trying. Here comes "Apples," an old black man in a red and white draperies, with a handful of yellow plants to eat, and water to fill the filters. This is my "Company" in Ceylon. The frog has got under the





a brown teapot, and there he sits, fully persuaded that he has got under a stone. Through a country so peopled we travelled for two days northwards from the mountains to Anarudhapoora. There we stayed two days, and thence we travelled back for two days to this quaint holy place. I could have spent a far longer time among the ruins sketching and watching the pilgrims, but G. C. wanted to move, so we travelled.

The old capital of Ceylon has seen over 2,000 years, and is eighteen miles through every way. It was too hot to walk far; but so far as I walked I found heaps of hewn stones, rocks, and rubbish, overgrown with tropical plants and tangled trees and creepers. Here and there a long green glade is open, and at the end is a brick dome, degraded to be a cone, and overgrown with trees. These are Dagöbas. If you want to know all about Dagöbas, read Fergusson on *Tree and Serpent Worship*. Devout Buddhists have taken to restoring these ancient shrines. Down one green glade I went, mounting steps, and getting down broken flights which marked the outer walls of the court. Then I got to a grove of gnarled trees, which bear a beautiful white perfumed flower. With these the way was strewn by the winds, and by the pilgrims. At the foot of the mound I came to an old stone covered with black ashes, and bits of camphor and wax, and flowers, the burnt-offerings and gifts of the pilgrims. In front was a marble wall, from which the red talus of fallen brick-dust and rubbish had been newly moved. It leaned forward, but it was fresh and unhurt. At each side of an off-shoot chapel stands a figure in bas-relief, well sculptured and graceful, dressed in the draperies

which men wear here now, and adorned with armlets, and bangles, and necklaces, and earrings, as men still are who can afford these braveries. Behind the head and conical tiara of this figure rise these strange hoods of seven cobras' heads. In his hands each bears a tree in a vase and a branch. In a lower compartment is a female figure, with two cobras rising behind the head. Next to the figures are seven-headed cobras as large as the men, coiling and twisting. Of these, one has clearly-cut dogs' faces, with forked tongues and the serpent's hood. Of these monsters I never saw specimens on paper or stone before, so I made some pencil-notes. Then I looked up and saw a lizard a foot long, pacing slowly along a ledge of marble turned red with brick-dust and rain-water. I brushed the dust from the sculpture, and came upon a painted necklace of flowers, with the colours as fresh as if painted last week. So this whole wall is a study for an artist or an antiquary. The beauty of form and colour, and the perfume of the whole place, were a delight for anybody with eyes and nostrils and brains. I got back in the dark. The Resident made a raid on a big snake, which escaped among stones laid at his door to make a new room. That was not so pleasant, but nobody seemed to care a row of pins. While sketching a snake in marble at the foot of another great mound of ruins, a lot of pilgrims came round, with their left sides to the centre, and clasped their hands, and prayed and muttered. A man in a snake-pattern sarong, with naked body, long black hair in a knot, tortoiseshell comb and earrings, came to look at me, showing his white gleaming teeth. I looked as pleasant as I could, and my face soon as thick as the wall. The sun has been so hot





HEAD OF NAGA

and his work is to supply steamers at Galle with vegetables. He pays coolies to work at these ruins. "Buddhist religion good," said he; "no do harm; do good." "Yes," said I, gravely; "and give money to priests." "No, sar," said the Buddhist pilgrim; "priest no take money." I thought of the box, and changed the subject. "That old woman say prayers to that Naga?" I asked. "No, sar; that all the same for curio." "What for she say prayer?" "Inside that Dagōba image of Buddha eighteen arms high" (here he touched his elbow); "and four lamps of sapphire, and Buddhist book, and plenty thing, silver and gold," said he. "Sometimes when men pray, the book speak." "But how about that Naga?" said I, thinking of Fergusson. "Oh," said he, "these Tamul coolies no good; they take stone away and things. If man take them, serpent come and bite him." "Will they bite me," said I, "for drawing?" "English Government good; mend this place," said he. "Serpent no bite master." "What are all those ashes on that stone?" said I. "That," said he, picking up a bit of camphor, "that offering; I burn plenty camphor there last night, and *eau de Cologne*, and perfumes." Only fancy *cau de Cologne* burned for Buddha at Anaradhapoorā by a bumboat-man in a sarong. "That stone Yodin work," said the pilgrim, pointing at a giant lotus that the biggest elephant in Ceylon could hardly roll over. "Giants!" said I. "Yes!" said he: "all this Yodin work." "Who were the giants?" said I. "Ceylon giants," he said, calmly. By this time the sun had come over the top of the mound, so I had to escape. "Good-bye," I said. "Good-bye," said he, grinning: "I hope to have the pleasure of seeing master again." And so we parted, I much

the wiser for our interview. Next morning I saw my friend coming from the sacred Bo-tree with a lot of his kind. They came to a grove of granite pillars—about 1,600 of them, which were the ground floor of the Brazen Palace. The people squatted down and prayed, kneeled, clasped their hands, muttered, and prostrated themselves towards the pillars and towards the rising sun. There is nothing sacred about the Brazen Hall, so possibly they were saluting Phoebus the Sun, Bel and the Dragon. "Good morning," quoth my friend, when his orisons were ended, and he had another pleasant chat. A friend asked what I thought. "The Rajah says," explained the pilgrim. I never was a Hindu before, but I was glad to find that value upon the word "Right" out here in Ceylon. Then I went to the Bo-tree, and thought over everything of the kind, from the Garden of Eden downwards. The story of the tree is that Buddha attained "Nirwana"—i.e., he died under a Bo-tree in India about B.C. 500. The Rajah of Ceylon, when converted, asked the other Rajah for a cutting. The other was wroth, but "How shall I dare to cut that sacred tree with a common instrument?" Advised by a priest, he took a very fine pencil and made a mark on the tree. Thereupon a cutting came off and descended into a vase, and was carried to Anuradhapura and planted, and there it has gone on growing ever since. The connection of ideas is Buddha and the Bo-tree, which last was sacred before Buddha. But serpent worship is clearly mixed up with this old tree religion. At the door of the outer enclosure are four coiled snakes carved in stone, with their heads raised and tongues out. He is a very graceful figure.



SEVEN HEADED NAGA, ANARADHAPPOORA, CEYLON.

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with tall conical caps and the hood of seven-headed serpents (*Is-hatta-Nagà*). The one to the right holds a branch in his left hand; in his right, a vase, with a growing plant in it, probably the miraculous cutting. Two quaint dwarfs, as high as his knees, hold and manage his draperies. The figure at the opposite side has all the lines and hand offerings reversed to suit the architectural composition; otherwise it is alike. They are called *Duruta pàle*, door-keepers. Manifestly they have to do with the tree, and the snakes and the dwarfs probably were the ancient divinities converted, like the men to the worship of Buddha. The story tells that Indian gods worshipped Buddha, and that they may in time, by good acts, promote themselves to be Buddhas.

Dragon monsters, which my guide called alligators, make the side walls of the flight of steps. Cobras come out of their mouths, and their coils crown the dragons. At the threshold is a moonstone, adorned with elephants, horses, lions, oxen, thirteen of them walking with their right to a central lotus—that is to say, they are marching sunwise round a thing which may represent the sun. All the ornaments on these stones—leaves, twigs, birds, &c.—grow or move in the same direction. Now, I have watched the creeping plants in the jungle for forty miles, and they all coil with the *left* side towards the centre “widershins,” as creepers do north of the tropic of Cancer. So I have come to the conclusion that the march of the beasts sunwise on these moonstones, which are trodden under foot, has to do with that old northern astronomical worship in which men followed the course of stars and heavenly bodies round some pillar or sacred place, as the shadow goes round a gnomon in the North. Traces of the

custom survive in Scotland and Ireland and elsewhere. it is grafted on the tree, and in active growth. Here it now passes to the north of me, and my shadow goes shines the other way, as the creepers go round the tree. But for the greatest share of time the sun travels as in England. On the very altar of the Bo-tree, in the side of the inner wall, among the black ashes of newly-burnt camphor and wax, and white flowers, is a newly-offered image of a cobra coiled, painted and adorned. The round the tree, which has been worshipped for more than 2,000 years, and is daily worshipped now, are serpents, signs of solar worship; and these dwarfs, who have to do with fairies, demons, kobolds, and all the strange, under-creatures of popular tales and Highland superstitions, felt the value of my "rubbish" so strongly as I did when I saw that clay serpent amongst the flowers strewn at the base of the Bo-tree, sacred to Buddha, but holy before he was. The door of the inner shrine is quaint, and unlike any I ever saw. The keystone of the door is a monster head with glaring eyeballs projecting. From the mouth pour the elements of the doorway—flowers, scrolls, scales, and traditional dragons' heads swallowing the scrolls. Two figures, with drawn swords and plain hoods, stand on each side. Two snake-hooded, tree-bearing janitors, the first lot, guard the steps. I found many like them else. I waited, glowering and dreaming till a boy with a white collar, a bare right shoulder, and a canary-coloured pleated shirt brought a big key. Then I went up, and entered the inner shrine with the same garb. The

about them, fresh and vigorous, covered with long-tailed green leaves. I tried to find some way to the covered trunk of the tree itself, but way there was none. It is all built into a castle of brick. Many large branches fell lately, and were solemnly burned. Many large trees of the same kind are all about the inclosures, and the oldest trunks have fresh shoots. I suppose that *the* sacred tree is a bunch of palms, I got down, and the serpent tempted me to commit sacrilege. The yellow boy left me to attend on a lot of dark ladies who had come to offer rice. I was alone with the only policeman in the place. I asked him if I might cut a palm-leaf for a stick. He said "Yes," so I cut two. We went to the back of the yard, out of sight of priests and grims, to a fallen Bo-tree which the wind had felled. I thought of Esculapius and his disciple the doctor, and I grasped my knife. "If I were to cut a branch off that tree," said I, "what would the priests do?" "They would do nothing to master," said the police; "they would say nothing to master; but they would think in their hearts that it was very bad." The man in the tortoiseshell comb is a Roman Catholic. His gentle eloquence of tone and eye and speech conquered the Tempter, and made me use my knife to cut a nail. There was no Eve to make me take forbidden fruit, and I took none. By the way, this *ficus religiosa* bears no fruit, and the leaves are burned when they fall. I got out of that sacred tree inclosure with my palm-leaves and a clear conscience, and went home to breakfast, and then we started at noon, and drove through the jungle in the heat of the day till the shadows fell eastward and we got to our ruined rest house, from which even the master had retired. So we got

here; and here I am in a geological puzzle. From the north of the island the rocks are sandstone and folded from east to west, striking north, and traversed there by dykes near Galle. The central part is mountainous, up to 8,000 feet. The plains which these mountains are studded with hills, which are these many are rounded, as rocks are in glaciated. The low plains between these islands in the smoothed, worn rocks, thinly covered with angular debris. Some, as here, have caves near their tops are made into temples. They look like sea-caves of some are large loose stones of the same rock. Dagōbas are on most of them. Here and there in are large stones, still of gneiss. In the north are and recent fossils. Here there is nothing but angular debris of gneiss. It looks glacial, but I believe ancient sea-work. Of one thing I am quite certain: of this whole land is due to carving as plainly as is of the seven-headed cobras at Anaradhapoorā. It is how the sea ever contrived to cut a plain and in this fashion.—Salaam. J

NO. LIV.

DIDIROYA,
Friday, May 7th, 1896.

MY DEAR V.

I owe you a letter, so here goes. I have been long to your mother, this is the sequel. The glass 89°. I am sitting in a shed by the wayside, amid bunting, and white sheets, and strange gear hung about by the Rat-in-my-hat-nya, or some such name, a country lord or lord lieutenant of a

something of the sort. In front of me is a plate full of green oranges, yellow limes, and plantains, and a glorious pine-apple with a grand compound crown, a "hen and chickens." A mile from this place we were met by a band of tomtommers, they had white turbans on their heads, and white robes round their waists, silver bangles and earrings on their dark skins, their black eyes gleamed and their white teeth shone as they grinned welcome. Three old ones with grand beards and portentous "biceps" carried large single drums, two young ones, of whom one was exceedingly handsome, carried double rattle-drums, and all had fists and crooked sticks. They formed in front of G. C.'s white horse, who had quietly dragged us through the forest, and with a wild prance and a military quick step the five drummers began to strike and to stalk. The patient white steed tossed his nose in air, and danced into the place where a ditch ought to be. "Hi, top!" shouted the driver; "you musn't do that," and the whole procession was stopped. We drove through crowds of men in silence, got out, and found breakfast. I begged leave for the band to perform. The old men led, prancing wildly about in a kind of quadrille, advancing towards the young ones, who played their double instruments with all the skill and rapidity of French rolls. The old prancers bent to one side, and cuffed, and beat their drums till they roared and howled. I sat in state in an arm-chair, and expressed my entire approval in a neat speech. We gave a guerdon to the minstrels, the crowd scattered, and we fed sumptuously in the shed. The Rat, &c., is a man of good descent, who holds his title under Government. The agent had sent him to get his place in order for us, and he had got up this demon-

stration on his own hook, I believe people who drove elephants through of Edinburgh, and according to the murderers. We got the old swell i dignity, and made him civil speech. He went away.—Presently came i “ nice cool drink from a high tree—v It was toddy from a palm. Then co great yellow eggs full of sweet mil beautiful shell. While I write, I he to accept a jungle cock and hen. The of his hide presently. This, an it p state as a friend of the Governmen nor, and with the Superintendent-Ge sure that it was not better fun in the sent on early last night, and we star a quarter past six. We had not got creeper, like a brown frilled ribbon, us down on the road to look at it. till the tree bent, then the creeper le wondrous plant coiled itself about on at it, for neither had ever seen the li and coiled them up and started. rivulet of beautiful clear water da under a green festooned tunnel of f had to seek for gems. I found m but nothing worth carrying off. The frogs and little fishes, and fresh-wa in the pools, glittering in the flick fresh breeze, and a cool green shade

the first we have seen for weeks, and we longed to stay there and rest. I found a lot of old white shells; we threw them into the water, and the fish ran away with them, fighting for the spoil. We got on to clearings through which grand green conical mountains, which here stud the plain, showed like islands. We came to muddy pools full of muddy mouse-coloured buffaloes with great horns. They got up lazily, or rolled over and stared at us. Youthful and foolish buffalo calves walked on tiptoe through the green clearings to stare at us, and tucked up their tails, and fled from the terrible presence of the white horse of the Campbells. Thereby hangs a terrible tale with a prophecy in it fit to make a Campbell's hair turn as white as the horse's grey tail. I think you know it. The chief does, and so did Breadalbane. Many a time have I thought of it as I followed these white horses through Ceylon. Then we came to a thicket, and got out to look at a desirable walking stick. "Look here," quoth G. C., and I looked at a long creeper which curled through green leaves away into the darkness. A whole army of brown ants had chosen the plant for a road. They were marching swiftly up in thousands. They carried nothing, and none were coming back. I tapped the stem below. A whole squad scattered and ran under to see what the earthquake meant. There was nothing, so they joined the ranks, and the stream of soldiers marched rapidly on. I got a glass to bear on them, and they dazzled me. I never saw anything like that moving mass of living things, except the French *fête de fraternité* at Paris in 1848. To see where these were bound we must have climbed tall trees, so we left them. Then we got to a garden full of plantains and king cocoa-

nuts, and all manner of quaint fruits and flowers. We stopped at a wayside hut, bought and ate and drank for sixpence such things as gold would not buy at home. We got in, and the spare horse came up, and there was a brown Sinhalese man, with large brown eyes and straight black hair, and a tortoiseshell comb in it, and a bright classical brass vase in his bare bangles on his hands. The long-nosed black horse-boy with his long and slender neck, and sharp dark face, bent his head and drank. The white horse, with the sun shining on his satin skin, cocked his ears, and poked his nose under the turban to get a share of the water from the yoke. The background was made of plantains and banana trees, forest trees with strange roots, bamboos and a great wealth of fruit hung under a straw shed from which came the blue smoke of the fire from the rice pot.

I measured a tree with H's gift, and made it into a ring. I measured the stem of a tree cactus, and made it into a round. I stabbed a branch, and milk ran in streams up and down we drove over the roots of the mountains for twenty miles, with something new and strange at every step. We had the whole to ourselves, and it was glorious. Then we got to the band of music, and a curious life, but we had to be civil instead of savage. It is a bore. Now I must go and take off the bird's skin. So no more at present from J. F. C.—Sinbad.

P.S.—He had dined on seeds, beetles, and snails, and had dined on him, and he was tough; you shall wear a ring in your hat.

No. LV.

KURENEGALLA.

Sunday, May 9th.

We drove here seventeen miles in the early morning, pottering and enjoying life. "Look there," said G. C., "at that prickly pear with the white blotches on it, that is a disease which kills that horrible weed. It was found that a single leaf, carried to a district in India, soon cleared it of prickly pears, and that was a great discovery." "Let's have a look," quoth I, so we got down. The whole plant was covered with blotches of white downy stuff, and I suspected cochineal. I poked about in the down, and poked out a beast, and the beast very soon showed that magnificent crimson blood-red which nothing can beat. We squeezed one flat, and there was no doubt about the fact. Here was the insect in profusion. "Now G.," quoth I, "here is a vast country run wild, growing anything, and everything that men cultivate in tropical plains, and a tangle of jungle and forest trees; and here is a source of wealth and industry running wild like the jungle, and the sun's rays, and other gifts, which mortal men will not accept." "Let's smoke;" so we smoked and toddled along the road. "There's a snake's skin newly shed," quoth G., who has sharp eyes for serpents. It was gathered up damp, and smelling of snake strongly. I have it carefully wound round an old stocking, inside of another, and you shall see it. "There—look; there is a paddy-bird," said I, this time. There he sat, a great white curlew crane heron-like bird, with a grey head. A lot more were stalking all about the green fields pecking. One had got to the nose of a great

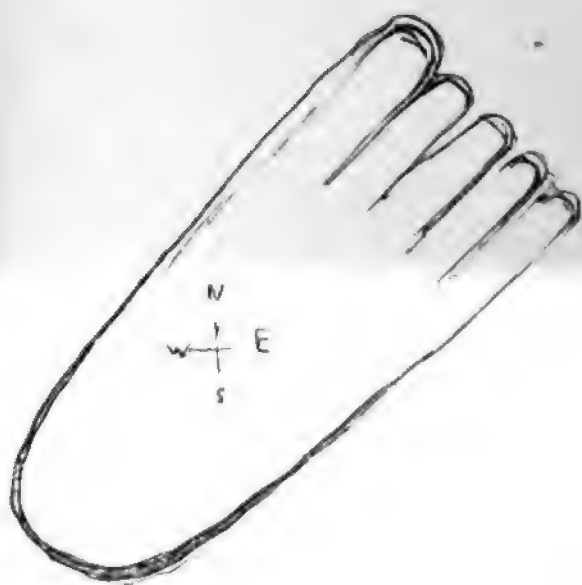
buffalo, who was browsing and wagging his ears, and wagging his tail to drive away the flies. The paddy-bird and pecked flies and ticks off the mouse-coloured black nose of the great horned erittur, and he seemed exceedingly pleased by the attentions of his white We left them at it. "There are wild parrots," comrade. I looked and saw specks like emeralds at sap-green of the growing rice. I got my aluminium and there they were, a shoal of pollies, as busy as in a barn-yard. One fellow with emerald-green w tail, sap-green body, and a shining beak, had got hi on a clod against a red bank of earth. What a b did look in the morning sun. "What are these fello there?" said I, pointing down the road. We got and found a party sent on by the Rat, &c. (lord-l of the county), one carried two king cocoa-nuts f drink. Another a bill-hook to cut them. A third and pointed, and then I remembered that we had asl Dagōbas. Manifestly a Dagōba was near, and we we at it. It was precious hot, so we held a debate. I it. We walked a mile over dry rice-fields, and thro to the foot of a queer round bare rock. Up there w and there was the Dagōba. It is white, shaped lik bell, placed on a square tray, with three shrines. T E side, is open to a shrine at the foot of a sacred with footprints of pilgrims in the sand going sun-w the holy tree. In a shed near is a mud Buddh dilapidated, with remnants of a glory or a snakeho not sure which. This rock, like the Dambool rock, pot holes in it. Some are large and full of dirty n

look-out from the rock, a hundred feet high, was over hills and plains, with scarce a shadow or clearing in landscape, except close to our temple. We got back again. "There's a cane," said G. There was something like a bamboo leaf with a soft thick bark and thorns, hooked-needles on a long climbing stem winding about the bushes. I cut a bit, and peeled it, and out came a smooth hard beautiful switch, round as a pencil, which I have been chewing ever since. It was some kind of rattan. We got over our pottering drive, while the sun grew hot and hotter. The wind blew and nobody cared. About ten o'clock we got to the house of the government agent, who had left a written order for our occupation. Here we are at the foot of the great Elephant rock, from which the place is named. I am in a wide veranda hung with horns and with elephants' heads.

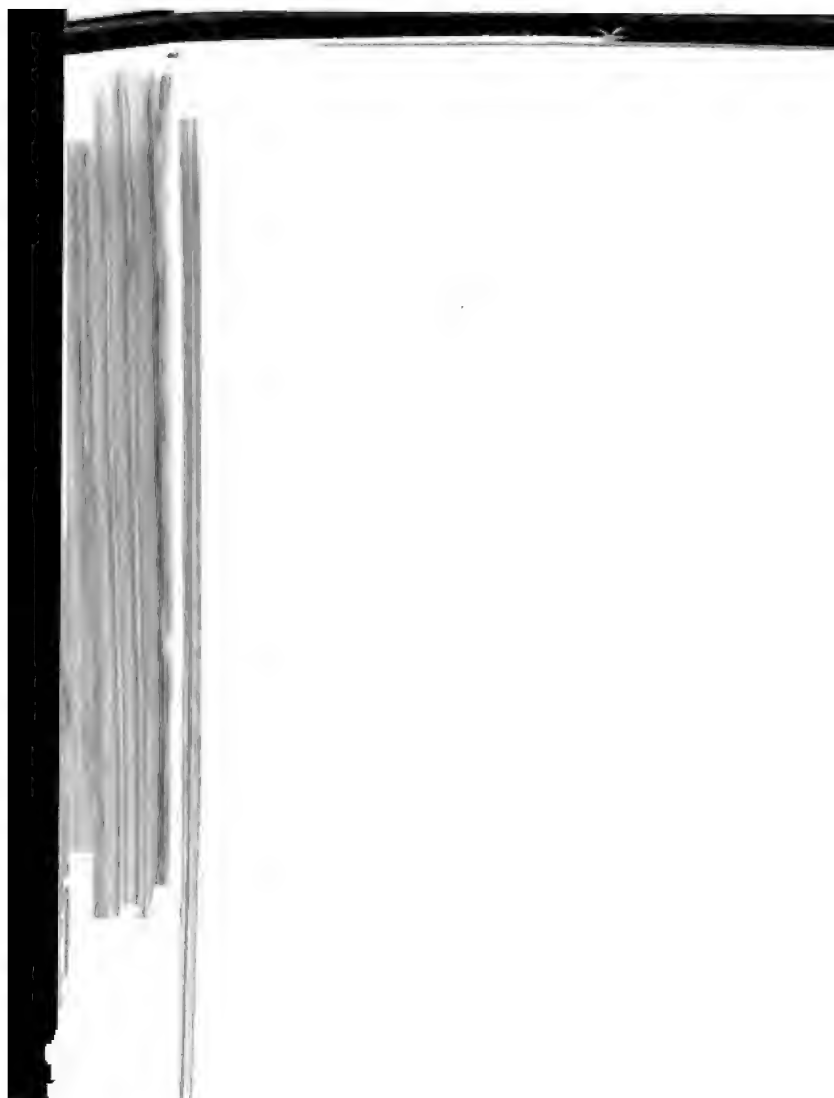
The nest of a tailor-bird hangs on a nail. Books, boxes, glove-boxes, flower-pots and dainty plants show the taste of the lady, who is up in the hills. A litter of puppies, and belts, and whips mark the pursuits of the gentleman. The acquaintance I made at Newera-ellya, my absent friend, is here.

A lot of sculptured stones show that we are on the site of the palace of the king of this old capital of Ceylon. The forest has vanished into the jungle. The stones lean against the trunks of magnificent India-rubber trees. Their roots coil about the ground like alligators, and flat-sided snakes or lizards. The roots drop from the branches and take root, and become tree-trunks. The branches meet overhead, and make a pleasant green shade, and therein sit "coppersmiths." They have been hammering like bells ever since we came. Too—Too—Too—as regularly as a clock. Then two of them join—Too—

too—Too-too—Too-too—then three—Too-too-too—Too-too. Then four, or more go at it, and do Handel's famous blacksmith's hammering an anvil to perfection. I did not get my eyes on them yet, but they are little birds. It was up before light this morning, and soon after dawn I was off coatless, with a shirtless, barefooted, breechless person to carry a bag of instruments. We walked in the shadow of the great rock up a smooth hog back of much contorted, or possibly fused. That took me to a inclosure, and inside that to the "Shri Pada" (holy foot) in the rock. The supposed foot was six feet long. I went down in it to measure. It was the right foot, and it pointed towards the N.E. The ladies of this country could not go to Anaradhapoor, so the Rajah about 200 years ago made this Shri Pada for the ladies to worship. Here is a D but no Bo-tree. Here are no carved naga stones. But there are two trees called naga (snakes). They bear a white flower with four leaves, and a round yellow centre O, like a ring of everlasting on a French tomb. It is a holy tree but bears no fruit. Near these snake trees is a temple. It contains a Buddha, with two standing Buddhas, one on each side. A pair of tom-tom beaters, and a couple of conch shells are painted on the door posts. On the roof Buddha is painted with a glory round his head, an umbrella over him, and the Bo-tree with its rat tailed leaves over all (Bo-tree). "Alla lia," sacred flowers, of which I send one, are painted on the roof, and strewed on the altar. To the right of the central figure on the roof is a Naga Rajah, with two snakes looking over his shoulders; he has a grinning case of formidable teeth, and the pair of buck teeth which I



ADAM'S FOOT, CEYLON



attributes to primeval men. To his right is a black-bodied elephant-headed person, supposed by me to be Gunputty, God of Wisdom. I find that I was right. He is an Indian god converted to Buddhism, one of that more ancient Pantheon. To his right is an alligator-headed brown man-monster. Next a man with long teeth, and two fish-like snakes looking over his shoulders. Then two more men in the dark. Six in all. To the left is (1) a toothy figure with a sword in one hand, and a snake in the other. (2) One with a star spangled tambourine over his head. (3) A figure holding a cobra in both hands. (4) A black figure. All this painting is fresh. The priest and an old unintelligible rushing-to-conclusions Christian Peon, who ran away from all questions with wild answers, gave me to understand that all three statues were Buddhas, that all the others were his friends come to fight *with* him (for him). It seems then that some of the Gods of Indian mythology were ranked among Buddha's friends, and that his chief friend was Naga Rajah with buck teeth, and snakes on his shoulders. Something like a procession of snake charmers was in the artist's mind, when he made the picture, and the people on the left. So snake charmers represent the ancient religion, which is connected with a holy twisted Naga tree. So we get back to "tree and serpent worship," connected with Buddha, who preached B.C. 500 or thereabouts. How I wish that I could talk to these people. We went on to the top of the rock, 700 feet, and then came down by another way, at an angle of 29° to 30°, in many places, on bare rock. I took off shoes and stockings, and got down with whole bones. I got a bath and breakfast, and now I have written this, which is going

to post forthwith. We have a three days' drive to Colombo, and after that I suppose that I shall take sea, and trot home. This is the hottest month, and the hottest place in Ceylon. I don't mind it a bit, the air is dry, but the glass never goes below 80°, and it burned my bare feet.

Good-bye.

No. LVI.

GERALD

Monday, May

MY DEAR MOTHER,

I have a letter to you, and one to V. in it, full of tricks," because I could get no stamps at K. Three of my letters at least ought to arrive by mail. Possibly I may travel with them. "Such is the post." We were up at four this morning. I tried to see by the light of a candle that the centipedes where my feet ought to go, and see that there were no frogs or snakes in the bath. Then I told myself an ass, and went to breakfast. A lot of puppets and untied my shoe strings. A lot of servants slept on the floor of the veranda, among the puppy fleas. While munching a plantain, I heard a whisper at the door of the "parlour." Then another and another of Sinhalese voices. I took a candle, and lo! there was a curly snake, newly slain with a bamboo. "Is he a bad one?" said I. "Yes, master, very bad," said the barefooted man in the red turban, who had just brought in our tea. "In the midst of life we are in death,"

ly, and then he proceeded to handle the writhing of the deceased. "I don't believe he is dangerous at said. "What the deuce brought him in here then?"

"He was prowling about for mice, or frogs, or or flies, I suppose," said the other, calmly. I had et a couple of dark toads at my bedroom door, g away—I suppose they were escaping. As I sat on or-step a few nights ago, a couple of frogs dropped side me from the eaves. I firmly believe that they to drop on my hat, and missed. Last night at dinner, a green bright-eyed tree-frog climbed up the silvered llar of a lamp—he was put on the table. Not liking the y of a white tablecloth he hopped on my sleeve, then ped on to my shoulder, and crawled on my back, and e got to the floor and departed by the door at which ke was slain in the morning, among the puppies, by vants.

alese society is charming in the dark hours. Yester-made acquaintance with a dark gentleman of good who is "modliar," that is to say, a great swell. He me old gold and silver mounted swords and combs y, and betel-nut boxes of gold, old books, and his family. The lady mother sticks to native dress and ge. The father speaks excellent English, and his ers have been educated by an English governess. I so shown a yellow parrot who ought to have been and much civility. Then I took my leave, enriched hotographs. The old gentleman gave me a sequel to nbool legend. The first king of Ceylon, he said, was ed by a Rakshas damsel, and he married her. My

first story tells me how that came about. But the king found out what she was he discarded her, and the woman. Then the Rakshas changed into a great snake, and came to the door of the king's room, to blow venom through chinks and holes, to kill whom the king had married. But a guardian cut her into small bits, so when the king and queen they found a pile of fragments of the Naga in their door. That is a new bit of the old dragon myth.

The Naja Rajah who is sculptured about Buddha is the ruler of the Naga, (serpent) country, which is the ground. They have great riches and beautiful women. "The people wish to compliment a beauty, they say, 'Is she not as graceful as a Naga maiden?' The Naga has the power of taking human shape, and then they became as the lady bewitched the first Rajah of Ceylon.

"curious myth of the middle ages," Melusina. Now the slain snake of this morning may have been a damsel who knows that I am a bachelor. The game was played by appold with his bamboo I am sorry; but such is life. Our day's drive was over the roads, through a beautiful country, in a pleasant 81°. Quaint bare rocks rise from two to four hundred feet above the plain. The plain is a kind of rolling surface with waves on the strike north and south. The direction is vertical in general. Yet all the outlines are rounded. The tops of these stone rollers peer out from under the shade of great tree cacti, and cocoa-nut palms, and the thick growth of trees and creepers which men here call a jungle. The stone breaks naturally along this curved surface,

like the shell of a fruit. There is no boulder clay, and there is no rolled gravel to be seen. After much thought I have hit an idea. Yesterday I came down barefooted on a gneiss rock, and nearly burned my feet where the sun shone. That great heating process is of daily recurrence, and the daily heat must penetrate an equal distance, for the nightly cooling must stop the march of the sun's rays. Thus for a given depth these bare gneiss rocks must daily expand, outside of a colder shell, and so in time a Ceylon rock becomes like a crackle cup. When the rains begin the crackle shells off. If that be not the true explanation I can think of no other. May the Naga maidens entice me if I do not make anything else of their rocks. We were up and down picking flowers and looking at sticks all morning. We ought to have seen some ruins, but we missed them. Here I found an open shed by the wayside and a tame squirrel in a cage, and breakfast prepared by excellent Peechy, the cook. Here I sit near a big river among palms in a cooling breeze, with plantains and mangoes beside me, cocoanuts over head, and coppersmiths and Malabar pheasants, and golden orioles and song birds making music near and far. Our steeds are stabled behind us, and stand there munching grain. A small procession of coloured Vatican galleys and bullock carts goes to and from the ferry. If only these Naga maidens will spare me their company when I go to sleep on a stretcher in the dark, my life in Ceylon will be pleasant if it be wild. Picture to yourself Hercules and Pollo in ebony and bronze with a couple of Amorinós. Come with, some without coloured draperies and head gear, seated in a two-wheeled cart, behind a young humpbacked,

mouse-coloured, horned, high-actioned bullock, to miles an hour through a grove of palm trees; the divinities laughing and grinning and whacking them to make it go faster. That equipage has just whirled in yellow sunlight. An Apollino arrayed in a striped tunic grinning at me over our half wall. He and a companion have just wandered down the road to the mud branches in which they dwell.

My glass stands at 89°, and it seems needless to mention anything in such a climate. When we started, the wet clay floors of the verandas were strewn with pebbles, and heads and heels in white sheets, sleeping there on marbles on Roman sarcophagi, but more picturesque and graceful, because alive. They don't mind centipedes, toads, spiders, and snakes. Why should I?

Colo
Thursday, May

Here we arrived last night, in good case. We went from the camp by the river at dawn, and waded across. I could see no rolled stones, yet this river runs deep in floods. That night we got to a police station and camped there, as the second horse had gone. As of day we got to Negumbo through groves of coccinellid. There we fed sumptuously. What I drank I hope to tell you later; also how men go here now.

But I must hurry-scurry so I add no more.

O. LVII.

COLOMBO, CEYLON,
Whit-Sunday, May 16th, 1875.

DEAR MOTHER,

Three of my letters are to start with me in the French from Galle to-morrow, and this will join the party and come faster than I. I have written to Bombay to send letters home. It is too hot to travel about India now. Possibly I may find it too hot to travel about Egypt. In that I shall go on to Marseilles, and possibly get home before year of wandering is ended—some time in June. Make some stockings for I am nearly barefoot.

don't think that I have ever told you what I got to eat. a housewife with a good cook it may interest you, so here is for family information. A very pleasant, athletic old gentleman who had been along our road printed advice to travellers and told them to take "everything." Above all, were to carry beds and mosquito curtains, a filter, and a of chickens in coops. The result in his case was a train lark-skinned bearers streaming along the road with all these things poised on their pates. As soon as I got clear of my adviser I begged G. C. to take *nothing* instead of everything. He would take some tins of sardines, one of salt water, and several of preserved, nasty meats, and these have made the round and are here except the butter, which ran away. I fancy it came from Finland; I believe I have seen it there, and it was nasty from the beginning. Now the notion of white men in this land of plenty is to live as if they were in desolation. They feed on tinned soups and rags

of stewed beef years old, they eat raspberry jam and berries from beyond seas, and gooseberries, and they eat that species for so doing. The fashion of the natives is to go into the jungle, and cut down creepers and dig up roots and climb palms for toddy and king cocoa-nuts, and to grow pepper, curry and rice, and the kindly fruits of this glorious country in which they dwell. Therefore I argued that we could do without "everything," and we did very well indeed. At the last police station the sergeant provided long chairs and sofas, which were placed in an airy shed made of woven palm-leaves and bamboo. In the midst was a table of large size, on which was spread a coloured cotton cloth. I believe that it was the dress of somebody. We expected to wish for breakfast. There was a rush and a scurry and a lamentable noise, and the flock of chickens lost a mother and sister. A dark Malay beauty, wife of a constable, was cracking cocoa-nuts and rolling jungle spices and under a round stone. A constable went to market and returned with pine-apples and plantains. Somebody cut down mangoes off a tree. Tea was got; knives, forks, and plates were borrowed from men in the village; and out of all this nothing grew a very pretty little feast, which I could furnish in London for many pounds. Our horse had taken the wrong road, so we dined as well; and next morning had an excellent breakfast of plantains smashed in sugar-milk, and coffee all grown in Ceylon, and costing me nothing. The sergeant valued the whole at a rupee a course he got more; but that was cheaper than an army of fifty coolies to carry nasty, old, northern, dear, stale beef and mutton, salt, hairy butter. As for beds the couches were

d soft, and my plaid did its usual duty, while my bag came pillow, as is the wont of that article when I travel. Tropical mosquitoes do sing and bite, but to a Lapplander they are simply ridiculous. Further, I always argue that strong drinks are a mistake. The planters and their guests at Ceylon hotels begin with a "peg" of brandy and soda. At breakfast they commonly drink a pint, often a whole bottle, of champagne of execrable quality from tumblers to which blocks of ice manufactured here bob uncomfortably. For the rest of the day "pegs" are popping at the bar continuously, and heated men cool their reddened noses on miniature icebergs floating in fizz. More moderate men drink beer. I drink beer when I can get it. But when I cannot I drink tea, and then mosquitoes and leeches do me small harm.

Deer and the other small deer often lame and lay up people to put themselves outside of "pegs." They do it in Lappland; they do it doubly here in the heat. We got a bottle of toddy from an officer of a local court, and we enjoyed it at our next station dinner. Next day our drive was towards the south and Negumbo, through cinnamon and cocoa-nuts and cardamom root, all growing luxuriantly in sea-sand. I saw a man in a cocoa-nut grove armed with a big knife. His garments were Nature's, adorned by a turban and a belt of linen sheet, which dangled a great black earthen pipkin surnamed a *kalash*.

We stopped, he stopped. Then he caught hold of a frond made of a palm branch, one of a series arranged like the ribs of a sail on a mast. He walked up a very tall tree as easily as I might up a gentle hill. He took a black pot from beneath the stem of a palm-flower, and put it into the pipkin at his waist, cut a thin slice off

the flower-stem to make it bleed, and then he wards down the tree with the gait and agilit handed progenitors the Darwinian apes. He he get "toddy." Out of that he gets a fresh m beer at noon, and arrack when the stuff is fi distilled; out of that he gets drunk sometime headache and cholera. The whole of this big is set in a ring of green cocoa-nut groves which toddy, and curry, and fresh milk—and this is ti which white men carry "everything."

At Negumbo we got an inn breakfast of fresh of tinned salmon, with prawns three inches lon rice, and fruits, and milk. After it I sketel breezy veranda. Those marvellous flying prov from their holes in the swamps and jungle in s rushed past the inn door in a smooth shallow the speed of a railway train. I never saw a sails fly like them. The hulls are dug out yards long. Above is a narrow slit hardly wid a man's leg to stand in. The crew sit with l over into the water, or stand upright. The boat sit on the water alone. But from the side proj bamboo bows, and at the end of that double lev log in the water. The sail is a great oblong she the arms of a bamboo triangle, and fast at the boat. The outrigger is to windward. When i a man crawls out on the bamboo fiddle-bow. harder he goes further. If it blows very hard men get out of the boat and sit in the sea on th a man when it was weather and the harder

faster they fly. As the men wear less clothes than naked coolies, and the sea is 85° , these fishers are nearly amphibious. It was beautiful to see boat after boat run out of the cocoa-nut gardens, fly past, turn, and become almost a line end on; wheel round a wading prawn-fisher and whisk off to sea through yellow sand and white surf. It was beautiful, but very hard to draw. So I looked and smoked; and listened to a thunder-storm which came and went its way heralding the S.W. monsoon. The cholera, by the way, was very bad at Negumbo. As we drove along in the cool of the evening to this town, we stopped to see a cinnamon harvest. We walked in at an open gate, and through a lot of trees about the size of currant bushes at home. At the end of a road was a shed, and we walked in. On my right, with one foot on a sloping stick, sat a lady with a big knife. She laid a strip of bark on the stick at her heel, and then with the knife she scraped under her knee with both hands and the knife. It was a pretty graceful quaint action. She was scraping off the outer skin of the cinnamon bark. The shed was full of people, men, women, and boys. The head man, to please us, got a stick and peeled it. He took a blunt brazen knife and cut along the bark. Then he beat the stick, then he poked in the brazen point, and the bark came off like a pipe, or a half-pipe. Next it was scraped, then all little fragments were packed into the cinnamon half-tube, and tubes were thrust into tubes till the whole was of the right length. Then a cinnamon bark "stick" was laid on a pile like it, and the sun dried the lot. I saw bales being tied up and sewn in canvas later at Colombo. I got a bit and munched it in that garden, and straightway I was six years old in the housekeeper's closet out in the

western ocean on a Scotch isle. Not one of us could converse with these landowners. So I lit my pipe with a crystal ball, and they exclaimed "Diamond." We put on our hats and, mutually saluting in our several foreign tongues, exchanged good wishes, and were all polite and much pleased.

A little further on G. C. spied a little brute like a grey polecat or a little otter. It was a half-grown mongosling, or youthful mongoose, routing about in a field. We stopped and the beast skedaddled for a house. His master brought him in his hands. G. C. took the baby and put it in his claws, while all the village stood round and gazed. The lissom little brute twisted and scratched, but he did not do much hurt. All he wanted was to get out of the clutches of the Superintendent-General of Police. He was loose at last, and the speed with which he scampered off home to his master's house rivalled that of the flying prow at Negombo.

We passed through crowds of people and got to the Haarlem Bungalow, which is a regular Sinhalese house big enough for a small army. There is a large mongoose in a post with a string. In a cage is a sulky palm cat that bites. In another is a tiny little lemur with large beady eyes, and something that suggests a frog and a bat about its limbs, gait, and voice. He is slow and sleepy, a terror to moths and flies, a rare animal, and about to die like the rest of his family. Out of two large boxes some hundreds of pots have been drawn. They are curious, hideous and of all sorts. Some are Sinhalese. One lot are serpentine. Another lot partake of the jungle cock and cobra. Others are monsters of the deep that stalk about the moonstones of Anaradhapura. Some are degenerate. Others are taken from Dutch dolls made

Others are portraits of modern men. One vase I take to be a copy from some Grecian drawing. But whatever they may have sprung from, the ideas are all turned into quaint Sinhalese monstrosities twisted into water pots and oil lamps. I might have the lot, but where to put live animals and brittle crockery I know not. I might also have a great pile of manuscripts written on palm leaves in characters unknown and an unknown tongue. They are poems like that translated by Steele.¹ I have persuaded mine host not to give me these gifts. I have got from him a lot more Sinhalese stories translated into English by natives, and these I bring home, having learned most of them already. We two live here alone and entertain friends. A general order was given to bring different fruits daily, and that is done. I have eaten papau and jack fruit, dong and jack-fruit seeds, mangoes, limes, pineapple, plantains, and things wonderful excellent and nasty. One is like butter and rotten eggs and bacon, but that I have not found here luckily. It grows and smells abominably at Singapore under the name of durien. A wood apple here is something like it. I am alive and well, and enjoying life. By half-past six P.M. I am to get into the Galle coach and embark from a place in which cholera has been really very bad and still is raging, like the Superintendent of Police down there, who is making war on decaying vegetables and dirty water like a wise sanitary man. By noon I and my family of letters and my boxes and bangles and bags hope to start. And how we get on I hope to let you know later.

Failte, J. F. C.

¹ *Kusa-jatakaya*. By Thomas Steele. Trübner, 1871.

About dusk we started in the carriage and drove slowly to the post office. There we met the coach, and put my traps into it. Then we drove slowly along the coach road. The gas lamps began to shine, and the day went out. And still we sauntered on before the coach. At last I called a halt. Then up came a trap full of friends who exclaimed: "The coach has gone." Tableau! Then one asked if we had met a coach. No. They had. Then it was surmised that the coach had turned to seek us. Then a distant horn was heard approaching, and the coach came. We all shook hands, and off I went to the sound of the horn. The governor's aid-de-camp was on board going home, and a namesake tea-planter. We smoked, and jawed, and fell asleep. The rest of my nocturnal impressions are composed of moonshine and coconuts, the sound of the sea, the horn and the horses. By dawn we got to Galle. Two hours later we were in the *Mei-Kong* French mail, and ever since we have been steaming homewards.

Tradition.—Here at one of the angles of the old world is a fit place to say something about Eurasian popular tales.

Fifteen years ago I wrote as follows:—"If mankind had a common origin, and started from the plains of Asia, and if popular tales are really old traditions, then the tales of Ceylon should resemble those of Barra, and the tales of Japan should resemble the others; because men travelling eastwards and arrived at Japan could not easily advance farther. Mr. Oliphant tells us that both in China and in Japan groups are commonly seen listening to professional story-tellers in the streets and it is to be hoped that some one will enable us to judge of their talents." (XVth *Circular Tales of the World*, p. 100.)

After that my friend Mr. Mitford began, and writers at Yokohama are at work now :—" Let a sufficient number of incidents be gathered together and treated as roots wherever they may be found, exactly as *ar* and *tra* are hunted through forests of Aryan words, and storyology will become a science like any other ology." (310, Vol. IV., *op. cit.*, 1862. Edinburgh: Edmonstone and Douglas.)

A French writer¹ has so treated the subject in 1875, and has reduced the number of root-incidents to fourscore. I think that the number is far greater. I have some hundreds in one story.

Most writers on this subject get their knowledge from books written by other writers. A French author lately published "The Popular Tales of Great Britain,"¹ and kindly sent me a copy, with a handsome letter to say that if his book has any success in France he owes it to me. He translated tales from a number of English books, and many from one of mine, which contains a small portion of a large collection which I myself made *orally*. The French author also wrote an able preface, and therein is a theory founded upon his knowledge of books. As he has done so writers are apt to do. Those who have taken knowledge from books look on them as the fountains and well-heads from which rivers flow to irrigate the minds of men. But men think and talk before they write; tradition is older than writing; and the great majority of mankind utter and hear thoughts because they cannot write or read them. Popular lore is orally taught, learned, and collected.

The people from whom I have gathered my harvests have

Léon Brueyre. Paris: Librairie Hachette et Cie, 1875.

no knowledge whatsoever of books, or a very small knowledge, which does not include printed popular lore.

I have often hunted the pedigree of a story. I have traced it back from mouth to mouth, from one country to another, sometimes through a book, always to a reciter of tales at last. Those who have travelled in wild countries know that all over the old world the telling of stories is a human custom. Professional story-tellers, oral historians, novelists, preachers, and ballad-singers are numerous in Japan. In Tokio they have regular stands, and beats, and an audience. Practised story-tellers wander about England, and are welcome guests at wakes. In the uttermost corners of the Scotch Isles, and in Ireland, men abound who can neither read nor write, whose houses were frequented in winter evenings by crowds of eager listeners. The Church condemned the practice, and so I had to wheedle and coax knowledge out of old sinners who told novels, instead of writing them; who taught Gaelic instead of Greek fictions; who sang about Fionn and Graidhne, and knew nothing earthly about Mars and Venus, or Helen of Troy. A friend gathered popular tales for me in Ceylon. Before I set out in 1874 I had some knowledge of three angles of a triangle whose sides take in most of Eurasia. Friends helped me in Central India, and in the mountains which bound the North of India. Books helped me in Norway, and in Russia, in Germany, and Turkey, in Persia, in Lappland, round the northern verge of the old world, in America, and elsewhere. I knew that certain incidents arranged in order make the skeletons of tales which are told all over the area of that big triangle whose southern corner is the Mediterranean Sea. The Ethnological Society

for the sake of my old friend Mr. John Crawford, my godfather, at the Athenæum, whose memory is green amongst his old friends.¹ It is the custom all over Eurasia to tell stories for pastime, and to recite poetry. True it is that many of these stock stories had got into written books long ago; but many never were in any book that I know, and seem to be as widely spread as the rest.

It is asked, How came these stories to be so widely spread?

I got a horse-riding story from Minglay, which is three miles long and one mile wide, and 900 feet high out in the Atlantic. There was but one old pony there, about as big as a big goat. The man who told the story could neither read nor write; he had never worn shoe or stocking or bonnet; he was over eighty; he spoke Gaelic only; and he had never been far from his native island; yet this man had a regular wild horse-riding story about a terrible black steed that I have never heard tell of. I thought that I had got hold of an ancient Celtic story of pre-historic times. I went to Minglay and heard the story, and asked the reciter, Rory Rum, where he got it. He got it from his son, who is a soldier, and he got it in the West Indies, where his comrades used to tell stories in the barrack-room at night. Another son was a soldier in the East Indies, and a comrade led him to hear a professional story-teller there who was reciting another horse story, which old Rory tells to storm-staid fishermen out in Minglay for a quid of baccy. It is called "The Blue Mountains." I do not know how Rory got that story, but I have it in Gaelic.

Memory is the best portable library, and a man's

¹ March 22, a paper was read, which was printed in the journal, p. 325.

head the best conveyance for oral mythology. The use of a book is to record for posterity, and to elevate lowly thoughts to the lofty minds of men who have learned to read. Myths are cephalo pods.

By wandering, I have got to understand wanderers, and to realize their ways of learning and teaching and thinking. At Nijni Novgorod a fair is held every year. I was there September 6th, 1873, with a memory stored with popular tales gathered in Scotland. With me was Cyril Graham, ex-governor of Hudson's Bay territory, who had collected the traditions of his North-American Indians, who cannot read books. I saw a sea of mud, with islands of packing-cases in it—tea, iron, cotton, fur, matting, and sundries; "about which wade and scramble Tartars, Circassians, Russians, Armenians; porters, carts, horses, carriages, and the descendants of the builders of Babel." I know that these people, who came there with goods from Siberia, China, and the Caucasus, from Persia and elsewhere, tell and listen to popular tales while travelling in caravans and boats. It is the same everywhere. The Mohammedan pilgrimage draws men from Java, from Canton, from Ceylon, from Central Asia, and from Eastern, Central, and Western Africa. When it has been shown that one man, able to speak two languages, has passed from one place to another, that is enough to account for the migration of that man's knowledge. Had we two travellers turned tale-tellers in Russia, our knowledge might have spread over the northern hemisphere without the aid of pens and paper. I have carried a whole library of popular tales round the world myself in mental pigeon-holes. Therefore this has ceased to be a question

Men and myths migrate together.

I know that folk-lore abounds in Ceylon. I have read Miss Frere's book, *Old Deccan Days*, and know what a harvest remains to be reaped in India. I have seen trains of natives of India in Ceylon, coming and going, migrating in crowds in search of work, and carrying their earnings home. Knowing that men's minds are the same in kind if they differ in power, I know that these hordes and all other hordes are carrying popular history and mythology, fables, novels, and tales, which they scatter along their path for children to plant in their minds, there to grow into a fresh crop of like growths, varied by different circumstances, like foreign plants in a new soil. In Ceylon I have seen many races of men—Malays, Moor men, Arabs, Sinhalese, Aryans and non-Aryans—all mingling, and learning languages and traditions to carry home. I find many religious and many earnest missionaries. When I find the judgment of Solomon told of Buddha, I suppose that a missionary taught that Bible story, that a Buddhist converted it into a sermon for his own uses, and that a native remembered the incidents, and dressed them and placed them where they were found, in Ceylon. I see my way through *the* book which is most taught and translated.

Believing that story to be true, it was told before it was written, it was learned before it was read; and so oral teaching goes on aided by writings, but orally and independently wherever intelligent men wander and converse.

Stories which were in old Sanskrit books are told in Ceylon with Bible stories, and with them stories which seem to be the same which I have heard and learned in Japan and in

the West Highlands of Scotland. Of them some at least are not in books.

I know of my own knowledge that men migrate and travel; I have learned that they have done so from the beginning of history, before books were. I know that tales and traditions which men remember travel with them, and spread from their mouths, through ears, to other minds. I know of my own knowledge how myths travel. They travel with men.

If one old British arm-chair upon wheels grew into hundreds of thousands of perambulators in a few years in Japan, one mental store of knowledge may grow as large a crop as a thistle when the north wind shakes it and scatters it.

The popular tales which I printed in a book were reprinted in newspapers and spread all over the earth. I myself set men to gather popular tales in Scotland, in Japan, in China, in Ceylon, in Fiji, and in many other lands.

The translator of the "Popular Tales from the Norse" started me, Grimm started us all; and all who have collected popular tales orally know of their own knowledge, as I do, that their best hunting-grounds are the minds of those whose sound memories are least encumbered with knowledge derived from books. I found that out long ago. This last circuit gave a wider foundation for my opinion to stand upon, and so I plant my post and mean to stand by it.

Traditions are very rarely derived from books, but many books are derived from tradition.

This looks rather like the schoolboy's declaration of war:—

" ' Here stands a post ;
Who put it there ? '
' A better man than you ;
Touch it if you dare. ' "

But it is not so meant. Many who think differently from me are far "better men," from whom "I take a licking," but they are scholars, not vagrants. I am a vagrant, not a scholar, and so I write as a professor of oral science might lecture over a camp fire to other ignorant readers of minds, who think and speak for themselves, having no learning. Trees grow from seeds; small things grow big; epics grow out of ballads; Shakespeare's plays grew out of stories and traditions; men rise to be heroes, and some have been promoted to be heathen gods. Excelsior! But when a new or the true religion appears, these false gods descend to be myths, and men, and monsters, in the mouths of story-tellers, and in the minds of wise men who despise them all as "lies." Lower they cannot go. But at the next turn of the wheel up goes tradition into a bookshelf to be classical, and to be taught at Eton, and at universities all over the world, from classical dictionaries. Like other things, so with mythology.

" Here we go up, up, up ;
Here we go, down, down, down,—a ;
Here we swing backwards and forwards,
And here we are fairly a-ground—a."

Nursery Song.

So it is with myths and with babies who delight in oral mythology and hate lessons. Therefore I say no more here about one of my favourite pursuits,—the pursuit of useless knowledge amongst ignorant men, "pro dilectatione stultorum."

No. LVIII.

Rm 86

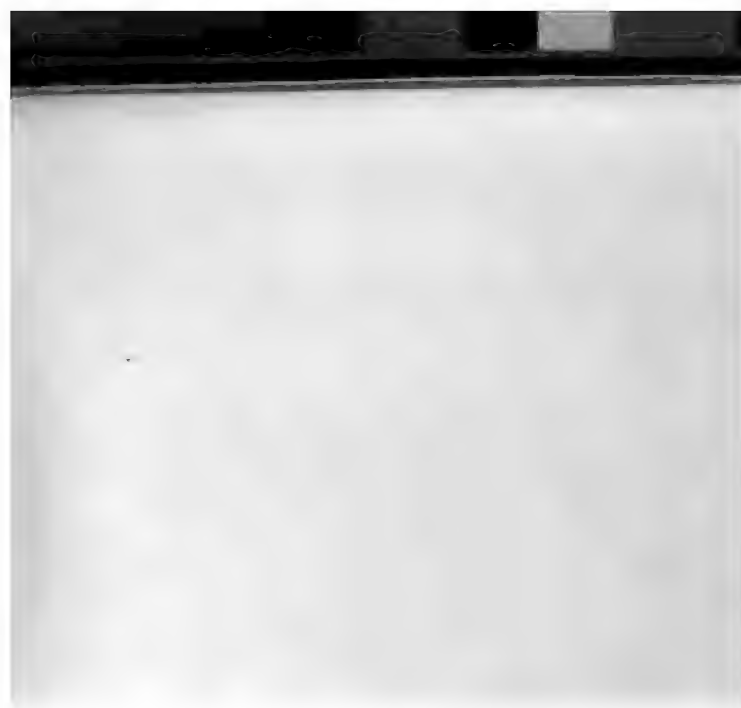
Wednesday, noon

MY DEAR MOTHER,

Yesterday we got to Aden. What there is in the Indian Ocean is in a horribly slow paper. I have been writing all round the world, which I could not do on board this ship, and which nobody ever will read, because I have put some work into it. Nobody reads such things except the writers. The most interesting thing I saw was the triumphal arch erected by the British for the entrance of the south-west monsoon.

The sun rose behind us in the usual solar fashion. Poets have likened to everything under the sun, from a boiled lobster to a fair woman. I was watching a cloud island with a snake-cloud dancing over it, an alligator crawling towards it, on the horizon, a whale; T—— was agreeing with me, like the *Hamlet*, when it occurred to us to look ahead. The west of us was fleeing night, and indigo, and a falling screen of tropical rain. On it was the Bifrost of the Norse gods, solid enough for the heroes to ride over, and bright as the gems of the sky. It was more than a half circle, for the sun was on the horizon, and it was the grandest triumphal arch ever seen.

The monsoon that Germans have explained as the march of Indra to battle with Ahi, the snake, was over the sea towards India, and we were steaming into the monsoon. Thenceforth it rained and blew; water





and waltzed about us, and so we passed through the arch of the battle till we got to Africa and Cape Guardafui. Then we got to Aden, where the tanks are as dry as chips. I was up at two to see the entrance. I was up again at six. At seven we were in our place, coaling; and from that hour nearly one a shoal of black boys swam in emerald green water round the ship like a flock of Highland seals. They sang and shouted and ate oranges and dived for coins. They chased each other, and sank and wrestled and turned heels over head, and generally, for good six hours, they swam about us in water at 88° with all the ease of amphibians. They are brown in the green water, and their heads are like brown mops. When we started, a cluster got hold of a rope alongside and were dragged. A sailor tried to haul in the net and could not. He got a tin and splashed their faces; they showed their ivory and white eyeballs and yelled. He tossed the tin at them; one caught it and waved defiance. He shied klinkers at them; they ducked, and he missed. Intermittently, three little wretches in as many hollowed logs floated alongside with paddles, going as fast as we did, shouting, "Leave for a dive." Then our pace got too fast. Our rope of life shed its black crop. They fell, and dived to clear the way, and we left them in the green sea, swimming for their head-quarters, a mile away. These boys beat all the swimmers I saw or heard of. The Singapore boys were marvels, but these beat them. (A Briton has beat them all since). I landed and looked at Aden rocks, ate a shore breakfast and came home in time. My wigs, isn't it hot! My plan is to rise about one and sit on deck for an hour, and drink lime-ice and water. Then go back to my bunk and sleep with my

head out of the port, or in it at least. At dawn, a bath at 85°, 86°, or 87°, fresh run in from the sea quite cool. Then I and everybody in the lightest consistent with conventional propriety loll about and drink tea, coffee, chocolate or water. At half-past nine dress properly and breakfast solidly, slowly, copious manner of the French. We have outworks (*hors d'œuvre*) followed by kitchen plates (*plats de cuisine*), and fruit and cheese, and *café de Mocha*. I know that you will be for house-keeping. But the "dunnage," which is a translation of "outworks," take such a time that I depart long before the end. If I get very hot, I sit in the bath, crowned with a wet sponge. Then I work and work. At intervals we have tiffin and drink. At half-past five we dine. Then I go forward, and "the eyes of her," among the sailors and the monkey, and my coat, and smoke happy and cool. At dark I get my head out of my port, and sleep till one. We are a Noah's ark full of curious creatures, Japanese, Javanese, Eurasians, blacks, whites and browns. Robinsons, are here, also priests, and nuns, and naughty boys, and squalling babies, and hobble-de-ho "de hurls." I get jabbering to some of them. Like members of a large club, we do not fraternize much when first they go to sea. They almost always before they get to land, on long voyages. That, I shall avoid. Some have quarrelled with the cook at the dinner, of which some parts had a tropical touch. To put too fine a point on my pen, I might have said that on the perfume of a bevy of roasted quails.

peace-offering was a magnificent "rosbif," adorned with skewered prawns, and vegetable artificial roses. I hope that the peace is solid as the offering to John Bull. We have a Derby sweep on foot, and a champagne cocktail was going a while ago, meantime we are in that mysterious Red Sea, about which we read when we were not globe trotters, but toddlers, or squalling infants. Now I must get out of this nursery, into the north-east wind, which is pleasanter company than babes.

I don't know what I shall do. I shall post this in Egypt, and it may be that I shall go on with it to Marseilles. A poor sick man on board may put us all in quarantine. He looks terribly ill, and this Red Sea heat is desperate. We are right under the sun, between the sands of Arabia and Africa. Were it not for the north-east wind, my best friend, I should be grilled; as it is, I stew. Being in this melting mood, I shall shut this, and possibly write another if I survive.

J. F. C.

Sunday, May, 30th.—At Suez, 9 A.M.

NO. LIX.

"MEI-KONG" STEAMER, NEAR MARSEILLES,
June 9th, 1875.

MY DEAR V.,

It is absurd to write a letter and race it home, but that I am going to do. Which will arrive first remains to be seen. I wrote a lot of letters from Ceylon. I believe they are all on board. One is beside me, unsealed. The fact is, that I could not go to Bombay for letters only, and India was too hot for travelling. Just you picture to yourself getting into water at 88° ¹ to cool yourself, and enjoying it as a cold

¹ My glass reads too high— $86\frac{1}{2}^{\circ}$.

bath. That was the state of matters at Aden. I have been roasted and stewed enough in Java and Ceylon, so I set off for London with my letters. I have little to tell. Our pastors and masters instructed us ill about the Red Sea. It is emerald-green in shallows, and blue as blue can be in the deeps. The hills are yellow or white. I pointed out these facts solemnly to an old French salt up in the bows one evening. He smole a smile, and said: "On l'appelle ainsi. La mer noir n'est pas noir non plus." I smoked, rebuked. But why they called this exceedingly blue water the Red Sea I have yet to find out. Our life on board is the usual thing. About four I get up and walk the deck in a Chinese blue silk coat, a red bonnet, and yellow Turkish slippers, with nothing besides. I believe that they call me St. Paul; I don't care. Then I drink lime-juice and water, and take another spell in bed till sunrise. Then I get into a hot sea-bath, fresh drawn, and refreshingly cool at 85° or thereabouts. By the time I get out, tea, coffee, and chocolate are on the table. There sit men in all the Eurasian fashions of the East, with bare feet in slippers of all forms. By nine we must clothe ourselves to eat at half-past. Then we smoke. At noon we have tiffin. At half-past five we dine. At eight comes tea; but I am out of my clothes by sunset. Now it so fell out that the odour of some of our dinner was so strong, that a rebellion grew out of it. Two deputations waited on the purser (*commissaire*); a third, composed of Dutch and English, followed, and found that officer furious and contradictory. "You are all sea-sick," he said, "and do not know what you want to eat. As for the meat being unfit to eat, that is impossible." The deputation

retired, and drew up a memorial, to be sent to the *Times*. "Give them a good rosbif," said a friend to the *commissaire*. A bullock died. At breakfast two waiters bore in a vast joint of beef, all skewered over with red prawns. It was carried all about and exhibited; but, so far as I know, it appeared as hash at dinner. We had no more perfumed viands except fish. I fell out of health one morning on getting into the cool weather at Suez. Everybody did. Those who had ague about them shivered and grilled in the usual way. It was 69° by the glass, but we felt as if it were freezing. I asked for a cup of soup, and could not get one. I pointed out to a waiter that I was ill, and needed "*soins*." "*Si vous êtes malade, monsieur, soignez-vous*," said he. I was too seedy and lazy to fight, so I took his advice, and went to sleep, starving. I got some broth from a stewardess and some chicken from the children about night, and recovered. Of all the sets of ill-conditioned beings that ever sailed at sea, I think bad French stewards are the worst that I have met. But then these poor wretches are so driven that six are in hospital and the rest in despair. It's all that *commissaire*. Like Ulysses, I have sailed through Charybdis, past Scylla. I asked a man to hold my leg if he saw me going overboard at the rock of the Sirens. He looked puzzled, and asked me if I felt suicidal after my feverish attack. I had to explain. "Is it in *Télémaque*?" said he. "No," said I; "in Homer." I have seen Stromboli; I have seen Vesuvius. We were all three smoking our several pipes. Yesterday morning I was at Naples. This morning I was at the north end of Corsica. To-night I hope to get to Marseilles, three weeks and one day from Galle. I shall

send off this letter any way. I may stop to get some clothes washed somewhere, but you had better get a lot of the clan to come and dine. Tell your mother to slay the fatted calf, if I have not done it by word of mouth, and so for the moment good-bye. I started July 6th, so I have been gone eleven months and a day. All I know about you all is that you were well on the 1st of April. I hope to find you with good appetites.

J. F. C.

No. LX.

LONDON, *June*, 1875.

MY DEAR —,

I am sorry to miss you. I got home on the 10th with a lot of very pleasant travelling friends whom I met on board the French mail, and travelled with through France, as fast as ever I could go, by rail. At Marseilles I met a very agreeable steward, who gave me coffee on board one of their well found ships out near Galle. He had fallen sick, and had turned waiter at the railway station. We fraternized like good republicans. At Paris we got the rough crust of railway dust off our faces. At Dover some of the party threw away cotton quilts that came from Cashmere. We paid large moneys to a loafer who had brought us bottled beer, and we were Britons on British soil once more in a railway train. Arrived in London, I went to my club, weighed, rejoiced, and called for a dram of coffee. I got that, and the usual two slices of brown bread and butter; and as I tasted the very same things, in the very same place, handed to me by the very same man, in the very same clothes, the last eleven months suddenly became as a dream. I looked into the reading-

, and saw the very same men reading the very same papers, in the same chairs, with the well-known home of perfect quiet and repose on their familiar faces. I heard the click of billiard balls, and seemed to awake at the table, just where I had gone to sleep in the travellers' library. There is a story which pervades the world in many shapes, of a man who went into a hill and met the fairies, and danced with them, and drank their mountain dew, and came out after a year and a day believing that he had been away for a night only. Like that man I only began to realize that I had been away for the best part of a year, when I found little children grown big, little girls young women, grey beards, and gaps at the gatherings of vagrants, that began as soon as I got home. I found that I, and many of my comrades, had been counted among the lost on board the *Japan*. I have cause to be thankful that we have got home safe and sound, and that gaps are so few when we close up our eyes for the battle of real life, and awake from our long sleep in fairy-land. I go out in the world, and rub my tired eyes when I look at my beautiful countrywomen, most beautiful that I have seen by far, in their new attire. I don't recognise my best friends. I sometimes fancy that I am still dreaming with all the incongruity of a dream, mixing up dresses of the Antipodes with those of our ancestors, and clothing my fair friends in beautiful new fashions. Conversations turn to revivalism, and I am back in Boston, and out in Oregon among mediums and lay preachers. I read of comfortable coffins; China and Japan rise before me with millions of unburied coffins, and grave-mounds scattered broadcast over the fields,

anywhere and everywhere, or placed by the road-side, on the only ground not devoted to making plantations for making money. People tell me that it is hot; I feel that it is not. I sit me down in my chair, and smoke where I have smoked before, and gradually fall asleep, and awake with a profound conviction that I must have dreamed all that I have written to you and others in these letters which have been copied, and which I have just read as if they had been written by somebody else. But there is all my stuff before my eyes home before me, ranged where I ranged the things when I bought them, and placed them in my mental models of houses at home, when I was over the way in Japan. Here are letters, journals, and sketches, beside real people and places, to prove that I really have been round the world since I saw you, and that I saw your fresh wheel tracks at my door, and missed you on the 10th of June by a day. That must be the very day which I lost out in the Pacific, down there ↓ at the other side, under the soles of our boots. It was a sad loss when it made me miss you.

I see nothing for it but to set off again, and travel the world widershins to unwind the thread of time, and come up again from "down there," to find myself in second childhood, all new babies unborn, and all their proud young mothers disengaged.

I hope to see you before I start again for "down there." Meantime, accept my blessing circumperambulatorically.

F. CIRCUMNAVIGATOR

THE PERIOD OF POLAR GLACIATION.

Paper written on board the *Great Republic* steamship while crossing the Pacific in October, 1874.—Added to at Yokohama in November.—Revised and added to on board the *Costa Rica* steamship while crossing the Yellow Sea, January 28.—Re-written and re-arranged at Shanghai while waiting for the French mail *Le Tigre*, January 31, February 1, 2, 3.—Added to on board the *Hydaspes* P. and O. steamship in the China Sea, February 18.—Read and revised and added to after a trip through Java at Singapore, March 31.—Added to at Newera Ellia, Ceylon, April 14. —Added to at Colombo after travelling about 600 miles in Ceylon, May 14.—Fair copy made on board the French mail steamer *Mei-Kong*, May 18, 19, 20, 21, 22.—Finished for final revision May 22, near the longitude of Astrakhan, having travelled round the world westwards.—Added to in the Red Sea and Mediterranean, having joined my route in 1873 at Naples and at Marseilles.—Finished for revisal June 7.—Revised in London after reading up geological publications, July 2, and sent to press December 1, 1875.)

" The Elements, Earth, Water, Ayre, and Fire
To rob each other daily doe conspire ;
The fiery Sun from th' Ocean, and each River
Exhales their Waters, which they all deliver ;
This water, into Clowdes the Ayre doth steale,
Where it doth unto Snow or Haile congeale,
Vntill at last Earth robs the Ayre againe
Of his stolne Treasure, Haile, Sleete, Snow or Raine,
Thus, be it hot or cold, or dry or wet,
These *Thieues*, from one another steale and get."

All the Works of John Taylor, the Water Poet,
p. 116. 1630.

THE PERIOD OF POLAR GLACIATION.

I.—INTRODUCTORY.

ABLE geologists make the "Glacial period" an astronomical question.

The Duke of Argyll, when president of the Geological Society of London, in his address, delivered February 20th, 1874, said :—" There is a region in which geology passes into cosmogony, and questions connected with the origin and history of our globe merge in the more general questions which arise on the history and condition of worlds around us.

" Other sciences are coming into more intimate connection with our own, and are widening our horizon as to the causes and forces which are to be reckoned ordinary in the operations of nature. Our planet is only one of many, and our whole solar system is only one of many more."

That able address was delivered on the words of Mrs. Somerville—" How little it is that we do know ! " The longer men live the more they feel what a great deal they have to learn in a very short time.

Mr. Evans, president of the Geological Society of London, in his address, delivered February 19th, 1875, while I was

steaming over the China Sea in the *Hydaspes*, said, in speaking of the Arctic Expedition then being organized:—"Should the discoveries of these successive floras with which we are already acquainted, and the existence of which it is so hard to reconcile with their present Arctic position, be extended into still higher latitudes, there will probably be a rude collision between existing astronomical theories as to the permanence of the position of the poles of our earth and stubborn geological facts." If the world is cooling, that may possibly account for the warm Arctic climate which has been proved geologically.

Mr. Evans added, "On this point, however, it may appear somewhat premature to speculate." It still is premature in July, 1875; but these two quotations suffice to show the present tendency of geological study.

Newton long ago surmised that all parts of the solar system are formed of the same materials, subject to the same physical laws; and that the sun, whose rays heat, is hot. The latest discoveries in solar physics show that the sun's atmosphere consists partly of light gases, greatly heated and incandescent, and of sublimed metals. These matters are driven outwards, form clouds, condense and fall. The sun appears to be made of matters known on earth, and to be a larger mass of them more heated. A solar "Glacial period" may be in the future, if the sun is cooling; but if the sun is cooling, and still is hot at the surface, a solar cold period is improbable in the past. If the sun's rays once had more power the world's climate would be warmer even in Arctic regions. So I suppose.

The sun radiates solar light and a little heat but radiates

neither so as to be appreciable on earth. On the surface are no visible gases, clouds or fluids ; all there appears to be solid and stationary. The forms of lunar mountains register old volcanic activity, fusion, motion, and far greater heat at the surface. A lunar "Glacial period " may be present, for the moon has certainly cooled ; but forms there register greater heat at the moon's surface, not greater cold in the past.

A former period of cold in the solar system is improbable if the moon has been hotter outside.

The moon accompanies the earth ; it is illuminated by the same rays, and externally is subject to nearly the same conditions of heat and cold.

The earth appears to have cooled at the surface, and to be hot within ; the spherical shape of it indicates fusion. Some matters which are sublimed in the solar atmosphere, still are sublimed on earth in volcanic eruptions, and by heat in the arts. Gases, which are condensed and combined in fluids on earth, and which there freeze solid when sufficiently cooled, are driven far from the body of the sun by heat. Hydrogen, which is incandescent in the sun's atmosphere, becomes incandescent on earth when ice has been melted, and the vapour of water has been decomposed by sufficient heat. Extinct volcanoes, igneous and altered sedimentary rocks and fossils, prove that our world has been hotter at many places which now have cooled. The world still is hot enough beneath the surface to affect thermometers where the crust is pierced or broken : in mines, in hot springs, and in volcanoes. The moon has cooled. The earth, exposed to like external conditions, has cooled also at the surface. If the sun and the earth are hot, and are cooling, and the moon registers high temperature,

an earthly "Glacial period" is improbable in the world's past. But one may have begun. We may see our past in the sun's present condition, our future in the moon.

Marine polar glaciation now reaches Lat. 37° N.; glaciers enter the sea about Lat. 60° N. One glacier is about Lat. 40° N., others are between 27° and 28° N., at 1,300 feet above the sea. An "ice-cap" may be growing, cold may be creeping inwards. But one, or many recurring "Glacial periods," and an old "ice-cap," need geological proof, because they are improbable, for these reasons.

If aerolites and the earth, and the moon and the sun which warms them all, are made of the same materials, subject to the same physical laws—if three be cooling in cold space; if two still are hot, and the smallest of three worlds has cooled outside to solidity—then it is improbable that the earth's surface ever has been colder generally than it now is.¹

The Glacial Period.—Whether the so-called "Glacial period" be counted celestial or terrestrial, astronomical or geological, universal, general, or local, it certainly is meteorological. It is a question of climate, dependent upon the observation of facts for solution.

In travelling it is demonstrated practically that climates are greatly affected locally by ocean circulation. Cold climates follow polar waters towards the equator; warm climates follow warm equatorial streams towards the poles. In the northern hemisphere, in certain regions, glaciers now flow, and polish, score, and wear rocks under them. They carry stones and *débris* down hill, and out into flat grounds.

¹ See *Frost and Fire*, 1865: "Uphaval."

as far as they reach. They reach the sea about Lat. 60° N. in Greenland, and their broken ends with their loads of *débris* float away as "icebergs" till they capsize or melt.

Icebergs now reach Lat. 37° N. In many Northern lands where no glaciers now exist, and in plains where the sea bottom has become dry land, "ice-marks" and "glacial drift" occur abundantly. Various theories seek to account for these old marks of extensive glaciation. According to one theory existing causes suffice to account for them all. According to another, during a late exceptional, or recurring period of excessive cold, the northern hemisphere was almost, if not quite covered by an "ice-cap"—by glacier ice of vast thickness, which flowed southwards from the pole on all meridians, covering the land, and filling the bed of the sea. This "ice-cap" needs proof, because it does not now exist; I have shown that it is improbable. If it ever existed the marks of it ought to be found on all meridians alike. If ever there was a "Glacial period" on our world, glacial marks ought to be found everywhere in the same latitudes, and at the same levels, in the same state of preservation or nearly. The following pages contain chiefly facts, gathered during more than thirty years of observation of glacial marks in the northern hemisphere; followed by a journey round the world in 1874-75, during which attention was specially directed to this branch of geology.

By 1865 the author of this paper had reached the opinion expressed in the volumes called *Frost and Fire* (see Vol. II. p. 147).

In 1873, after travelling in Ireland alone, and with the directors of the Geological Survey and their able assistants,

he got to think that the whole northern hemisphere may have been covered with ice when Ireland, Scotland, Scandinavia, and parts of North America were (see *Quarterly Journal of the Geological Society*, May, 1873). In 1874, after travelling round Europe, he saw reason to doubt that conclusion, and said so (*op cit*, November, 1874).

The geological question considered while travelling in 1874-75 may be thus stated:—

1. Do marks of ancient glacial action prove that the world's climate was colder?

2. In other words—Has the limit of freezing, which everywhere surrounds the world, in the atmosphere or underground, at various altitudes, which rises and falls with the seasons, and is raised or lowered locally where hot and cold waters flow, ever approached nearer to the earth's centre, so as to lower the limit of "perpetual snow" on high grounds, and to bring the isothermal curve of 32° at the sea level nearer to the equator everywhere, at the same time?

I will give my budget of facts and state my opinion in July, 1875, for what it is worth.

II.—EUROPE FROM THE VOLGA TO THE ATLANTIC.

IN a paper read before the Geological Society of London after travelling round Europe in 1873, I tried to show that marks of ancient local and of polar glaciation in Europe then known to me, can best be explained by ancient polar currents, like the Atlantic current which exists according to glacial maps, which at one time extended Scandinavia and

Finland lately were in the condition of Greenland as it is. The hills were covered by very thick glacier ice, which went far out to sea, in the latitudes of Greenland, as far south as 60°. To the east of Finland glacial drift of Northern origin is spread over the plains of Russia. That drift extends from the White Sea to Nijni Novgorod, and thence through Poland and Northern Germany, nearly to the mouth of the Rhine. It is bounded by an irregular curve which extends from Nijni Novgorod south-westwards towards the British Isles. All Scotland is glaciated to the sea level at least. Scotch mountains certainly were covered by glaciers of large size. All Ireland is striated. The lowlands are thickly strewn with local and Northern drift. Erratics are perched on hills, conspicuous ice-marks enter the sea in the south of Ireland. All Wales and the hilly parts of England have clear marks of local, possibly of polar glaciation. Northern drift is close to London. "Perched blocks," great stones balanced on hill tops, abound even in Devonshire near Lat. 50°. "Erratics" have been fished out of the Channel in trawls. Marks of glaciers are in the Pyrenees about 44°. The facts prove that the limit of freezing has been lower over Europe generally. I had learned to believe in a late "Glacial period." I had begun to believe in an "ice-cap" and in a series of "Glacial periods" due to astronomical causes, when I set out to travel round Europe in 1873. When I came back I supposed that climate was different when the low grounds of Europe were last submerged; when the Arctic current flowed towards the equator out of the Arctic basin, to the east of Finland, where shells are found; and to the west of the Ural mountains where few boulders have been found;

along the curve which Sir Roderick Murchison drew on his map of Russia as the "limit of Northern drift."

I suppose that existing causes produced like results of old. I suppose that cold sea waters bred glaciers on high grounds in Scandinavia, which then were as near to the polar stream as Greenland now is. The freezing limit now is lower in Greenland than elsewhere north of the line in the same latitudes. It is proved by clear marks that Scandinavian, Scotch, Irish, Welsh, English, and Alpine glaciers were far larger than any which now exist in Europe. That is one fact. The limit of freezing was lower over a large area. That probably was according to my explanation of the facts, when seas near these European highlands were chilled by polar waters cumbered with floating ice, drifting out of the Arctic basin over Russia and the plains of Western Europe, along the curve which now is marked by "Northern drift."

That theory was built of a large number of facts. I have coloured a map blue and red to show roughly where ice-marks are, and where they have not yet been found in Europe.

These marks certainly record a cold European period.

Of those who attribute the cold to a general "Glacial period" some attribute northern drift to the movement of solid polar ice. From marks they infer the cap of ice and the cold, and they account for the cold astronomically. But I have shown that cold periods seem astronomically improbable.

It seemed to me that more facts might help me to form my own opinion. My method had been to follow ice-marks where they led. If they led me up the course of a stream to

a hill country they registered a local glacier. When marks had led me over hill and plain, from Cape Clear to the Baltic, and to the Polar Basin; and when drift had led me thence southwards; these facts led me to a larger conclusion. I had to deal with "polar glaciation" in Europe. I set out this time not to "track," but to "ring" this northern secret:—to try to find out polar glaciation by going round the pole, crossing the tracks of ice. I have arranged my new collection of facts in geographical order, as I gathered them in travelling from the Volga westwards.

If an ice-cap made these European marks, then marks like them ought to be found all the way round the world. With that idea I started from London, July 6th, 1874.

III.—THE ATLANTIC—EUROPE TO AMERICA.

OCEAN circulation greatly affects climates locally. It results from solar radiation. A given bulk of salt-water is lighter at 88° or at 60° than it is at 30° or 25° ; consequently heavy water chilled near the poles displaces and flows under and lifts lighter water warmed near the Equator by the sun's vertical rays.

The *Challenger* soundings which have come to my knowledge confirm that which I showed in miniature ten years ago. Fluids unequally heated are unevenly weighted, and move accordingly. Recent deep-sea observations have proved that water, which probably comes from Antarctic regions, underlies, at a temperature of 30° surface-water at 85° , at the

Equator in the Indian Ocean.¹ Ever since the sun warmed the sea it must have circulated in obedience to this law, though the direction of movement varied with the shape of land under water and above it for the time.

The longest clear water way from north to south now is the Atlantic. The widest passage into the Arctic Basin now is between Greenland and Scandinavia. The way is wide open southwards between Africa and America. Between Liverpool and Boston, U.S., two streams are crossed which flow in and out of the Arctic Basin through the passage between Greenland and Scandinavia. In shallow water, near the banks of Newfoundland, about 45° N. Lat., 50° W. Long., the Arctic and Equatorial currents of the Atlantic move opposite ways, at the surface, side by side, in narrow lanes. Clouds of mist condense above the cold water, and there rest in calms; drift ice is often hidden in these sea clouds. On the Cunard steamers the surface temperature is taken every four hours as a precaution against drift ice. A diagram (page 84, Journal) shows the temperature observed on board the *Batavia* when I crossed between the 9th and 18th of July, 1874. Red shows where the Equatorial streams passed northwards at a temperature rising to 68°; blue where the Arctic current passed southwards at a surface temperature of 50°. The cold waters flow south-westwards out of the Polar Basin, and are perceptible nearly to Florida along the American coast. They carry large icebergs, of which some few now reach Lat. 37° N. Of these many slide off Greenland and lands north of 60° in America as glaciers. They carry stones

¹ Captain St. John informed me of this at Kobe in January, 1875. He made the sounding in 1874 from his ship.

and drop them where they capsize or melt. "Erratic
es," fragments of distant northern rocks, are carried to
by glaciers from an area north of 60° larger than India;
they are picked up on the coast by sea ice north of 40° .
They may be angular, or grooved and polished like stones about
elsewhere, or they may be rolled beach stones. They
drop at last on any other kind of rock or in mud, or on
kind of marine drift, now gathering at the bottom.
North of 37° , or thereby, modern erratics are strewn within
limits of drifting ice. They must therefore abound in the
North Atlantic along the coasts of Greenland, Labrador, and
Iceland; but few can reach or pass 37° . The present
distribution of northern drift in the Atlantic is a true cause
sufficient to account for erratics about the Caspian Sea and
Mediterranean in Europe; about Washington, St. Louis,
Mt. St. Helens, and San Francisco in America; about Yoko-
hama and Shanghai on the Asian coasts; or anywhere north
of 37° :—supposing the place to have been submerged, and
in the limit of drifting ice. Because of the present
limitation of Greenland, glaciers may have entered the sea any-
where north of 60° without a general glacial period. Because
the sea now freezes at New York, ice may have scored rocks
and moved stones anywhere north of 40° , under like condi-
tions of local climate. Northern erratics may have been
picked from icebergs anywhere north of 37° ; because ice-
bergs now reach that limit in the Arctic waters of the Atlantic.
But if there has been a general period of cold, erratics
ought to be found south of the present limit of 37° . I found
this in Europe, so my opinion was changed in 1873. In
papers printed during my absence, I find new proofs of

recent European submergence. In Scotland, in the north of Italy, and elsewhere, beds of Arctic and other shells have been found at spots widely separated. Taken with beach-marks and glacial marks these shells demonstrate submergence during that European "glacial period," which some writers suppose to have been general.¹

THE GULF STREAM.—In circulating, part of the ocean flows towards the N.E. from the region of the Gulf of Mexico, at a high surface temperature, cooling as it flows. Part of this warm stream sweeps round in mid-Atlantic, and passes Spain and Northern Africa. Part of it crosses the banks of Newfoundland, and passes Ireland, Scotland, Iceland, Scandinavia, and the North Cape of Europe. It reaches Spitzbergen, the Waranger Fjord, and Novaya Zemlia. It carries certain large flat brown beans, seeds of *Entada scandens*. These grow in Java. They are found, or worn, or preserved as curiosities, in the Andaman Isles, in the Seychelles, at the Cape of Good Hope, in the West Indies and Florida, in the Azores, Ireland, Scotland, Iceland, Scandinavia, the Waranger Fjord, and Novaya Zemlia. There a lately found island was named "Castanji ö." The "Gulf Stream," therefore, is only part of a general system of oceanic circulation which affects climate locally. The warm surface water carries warmth and moisture with it, and greatly affects the climate of Western Europe. The limit of freezing is raised and lowered on opposite coasts. The isothermal curve of 32° is carried northwards to the North Cape, and southwards to Cape Farewell, at the sea-level

See *Recherches récentes sur les Glaciers actuel et la Période glaciaire*
Charles Martignole. Paris, 1875. *Revue des Deux Mondes*, 15 Avril, 1875

he cold stream carries a cold climate, northern drift, and a northern Flora southwards, along the American coast; the warm water carries a warm climate and tropical seeds northwards in Europe.

In the latitudes of Norway, where few glaciers exist, and, where one only enters the sea, Greenland is covered with ice, and large glaciers enter the sea in most of the large firths. In the latitude of Wales, the climate of Labrador is exceedingly severe, and the sea is cumbered with very large islands of ice." On that shore Fauna and Flora are sub-arctic. In the latitude of the Straits of Dover, the Straits of Belleisle are full of large stranded bergs and drifting growlers" as big as ships. In the latitudes of Tiflis, Naples, Lisbon, &c., ships making for Boston and New York in winter get so loaded with ice near the shore, in the cold water, that they often return to thaw in "the Gulf Stream" which sweeps northwards outside. The limit of perpetual snow is lowered within the influence of the cold stream, and raised on the opposite coast by the warm water. In Greenland, glaciers enter the sea about latitude 60°. In Norway, at about 7,000 feet above the sea, Snæhättan has no glaciers, and little snow in summer. Mount Washington stands about latitude 40° 20' N. in America, opposite to the Pyrenees in Europe. It is but 6,000 feet high, yet wreaths of hard snow, which are locally styled glaciers, there outlast the heats of summer, and reach as low as 5,000 feet above the cold sea. I never saw summer snow as low on the Pyrenees near the warm side of the Atlantic, but I saw snow on Corsica and Crete in June 1875, where the warm Atlantic stream does not affect climate locally.

On one side of the Atlantic a local glacial period now exists on land and at sea. The chilled heavy water, in flowing southwards from smaller to larger circles of latitude, lags behind the solid earth which revolves eastward at greater speed as the circles enlarge, and their degrees grow longer. The Polar water describes a south-westerly curve, hugs the American coast, carries drift ice, and stones which float on ice, and these stones drop and sink to the bottom, only within the curve described by chilled water at the surface. That curve of actual motion corresponds in direction to the curve which bounds old northern drift on shore in Europe.

But in consequence of the shape of land under water and above it, and of the present direction of Atlantic currents, no erratics now drop on the warm European side. No marine glacial action now goes on in the Atlantic to the eastward of the Arctic current. On the American side icebergs reach 37° . On the European side none reach 72° . In Western Europe on shore northern drift comes as far south as London, say 51° ; but in Eastern Europe erratics are unknown outside of that old south-westerly curve, which corresponds to the actual curve of motion in cold Atlantic waters.

Old northern drift in Europe does not come quite so far south as modern drift ice does in the Atlantic.

The low grounds of Europe have been repeatedly sunk in many geological periods. Raised sea margins are on hill sides in Scandinavia, and in the Caucasus, opposite to Finland beyond Russia. I suppose that old northern drift was dropped from drift ice when the low lands of Europe were last under a sea which obeyed laws which still govern ocean circulation in the Atlantic and elsewhere.

I have coloured a map of the Atlantic blue and red, show how the present limits of marine Polar glaciation in that part of the ocean correspond to the "limit of northern drift" on shore in Europe.

Looking to the Atlantic and its coasts, existing causes suffice to account for marks of glaciers which entered the north of 60°, for marks of coast-ice north of 40°, for glaciation north of 37°. If the ice cap ever existed, marks of it ought to be found in America to begin with.¹

An exceedingly neat series of small coloured maps of the northern hemisphere, constructed from Dove's monthly isotherms, gives in blue the shapes of the isotherms. I published samples of like figures drawn by fluids on revolving spheres, in *Frost and Fire*, vol. ii. p. 450, &c. (Edinburgh: Edmonstone and Douglas, 1865). The shapes may here be expressed by a dot (.), an ellipse (O), and a comma (,). In September and October, the dot of blue, which represents cold air circulating on the outside of a revolving world, begins to spread over the Arctic basin. In my experiments that was represented by a plane revolving eastwards, on which coloured fluids were dropped. In November the blue dot (.) becomes an ellipse (O), with the long axis towards Canada and Mongolia. In December the tail of the comma (,) grows down Europe. In January it is longest. In February, March, and April the blue tail shrinks. In May and June the irregular ellipse (O) has shrunk to theoretical regions, towards the unknown North Pole. In June, July, and August, the lightest blue on the maps, which means freezing-point at the sea-level, disappears. It thus appears that cold winter air obeys the laws which govern fluids when they slide down on a revolving surface. The Gulf Stream which is part of a heavier fluid circulating as the air does, is at the junction of the head and tail of the comma (,) near Novaya Zemlia. The weather, that subject of universal interest, depends on fixed laws. Weather forecasts have become probabilities in America. Ancient meteorology must also have been governed by the same laws. Blackstone says that "Law is the perfection of reason. What is not reason is not law." The trouble is that facts on which to reason about ancient weather are scarce and hard to gather. I have tried to use ice marks and registering thermometers from which to construct curves to represent local climates, and thus far my curves resemble those which result from Dove's monthly isotherms, which are founded on facts. The N.E. wind is a fact.

IV.—AMERICA—FROM THE ATLANTIC TO THE PACIFIC COAST.

If an "ice-cap" ever existed, marks of it ought to be found on all meridians. In 1873 I travelled round Europe, and found no marks of Polar glaciation to the eastward or southward of a S.W. curve. In 1874 I set out to travel round the world, and in travelling to watch for ice marks everywhere Between the Volga and the coast of America, I found in the Atlantic a cause acting, sufficient as I believe, to account for European marks of Polar glaciation. In North America I found in 1864 that the distribution of glacial drift on shore corresponds to the curve now described by the Arctic current at sea. In 1874 I found the same curve.

Lines of railway now cross to San Francisco, keeping to the north of the present limit of marine Polar drift 37° N.; San Francisco is in $37^{\circ} 47' 30''$ N. In crossing the land some glacial marks are as easy to recognize as floating bergs are at sea.

Next to the Atlantic coast the land is a broad slope, rising gradually towards a coast range, of which the summit is Mount Washington, 6,000 feet high. As far south as the Potomac River, near the limit of 37° N., the Atlantic slope is strewn with northern drift, and the solid rocks are extensively glaciated most of the way to Washington. Behind the coast range, on which rolled drift occurs abundantly near the summit in passes, the Valley of the St. Lawrence, and the Hudson River Valley down to New York, are glaciated and strewn with erratics and drift. The Catskill Mountains and the Hudson River are striated horizontally to a high

1,800 feet, at least. The low grounds in these regions are thickly covered with boulder clay. Recent shells and bones of seals and whales indicate the presence of the sea, and a recent rise of land thereabouts. About Niagara and the flint rocks are polished and grooved, and the whole country strewn with large erratics carried from regions far to the north. The direction of ice grooves generally is south-westward in this region. Northern erratics abound near the Great American Lakes. In the valley of the Mississippi, about St. Louis, they reach nearly to Lat. 37° in the prairies. I saw none south of the Ohio. Many of these erratics are large, smooth polished, grooved, hard masses of gneiss, granite, and other such rocks, of which the nearest in situ are north of Lake Superior. So much I know from observation. Northward of the great lakes to Hudson's Bay, and to the Polar Sea, similar ice marks abound in low grounds in North America. That I know from reading and conversation. The distribution of northern drift may be expressed by a comma (,) whose head is the Polar basin.

Erratics and perched blocks and boulder clay, and all ice marks known to me, extend northwards in Labrador, as far as I travelled in 1864, towards Greenland. Erratics, very like those in Labrador, occur near Chicago; and thence to near St. Louis, southwards. I saw them in 1864. I saw them again after ten years at Chicago in 1874. I saw more of them occasionally in travelling westward to the Mississippi in August. North of the track they are numerous, and local geologists have traced them northwards to parent beds in Canada. There has certainly been a great southerly movement of ice blocks over regions between the Atlantic and the Mississippi.

There was a like movement between the Volga and the coast of Europe. But such a movement is now going on between Europe and America in the Atlantic, where polar glaciation is marine. These are the facts. Do all these marks on shore record a world's climate different from that which exists? or do they register something like the existing state of things?

If ever there was an ice-cap or a glacial period the marks ought to be generally distributed.

From the Mississippi to the Rocky Mountains the country is either "flat" or "rolling" prairie. The last is a plain more worn by rains and rivulets than the rest. The seeming plain is a gradual slope which rises to 6,000 feet at the base of the Rocky Mountains. The plains end with rolled drift at the level of the summit of the coast range, on which rolled drift is abundant. West of the Missouri there is no trace of glacial action near the railway. Along the course of the Platte River and as far as Cheyenne I saw no erratics, no large stones, no ice-ground rocks. From Cheyenne I followed the base of the Rocky Mountains southward to Colorado Springs, there I went up to the timber line on Pike's Peak to 12,000 feet above the sea. The snow was nearly 1,000 feet higher; that is to say, nearly 7,000 feet above snow on the coast range near the cold water. Near these snow patches, which outlast the summer, I found signs which may record the presence of local glaciers. Some agent has carried large blocks of granite from Pike's Peak to the plains, to 6,000 feet above the present sea level. The rocks above are rounded, but I found no striated rocks or foreign boulders about Pike's Peak. If these granite blocks were carried down by ice they were not carried out into the plains. They stopped in place

If the erratics east of the Mississippi were transported by an ice-cap, or by a glacier as wide as the valley, the same marks ought to be found on both sides. I looked for a lateral moraine at the foot of the Rocky Mountains: I expected to find northern drift there. For a distance of 200 miles at least there is no sign of any sort of glaciation between hill and plain. Local American glaciers may have existed near the level and latitude of glaciers which do exist in the Caucasus: but there certainly is nothing about the base of the Caucasus or of the Rocky Mountains or between these two ranges to indicate the passage of an ice-cap over Europe and America, which covered the land and filled the bed of the sea. The figure described by northern drift in America is not a disc but a comma (9).

Having reached Colorado Springs and that conclusion, I supposed that northern drift was spread over these American plains to the limit of 37° N. on some few meridians only; *not* by an ice-cap during a glacial period, but when the low lands were last submerged so as to let an Arctic current flow from the Polar Basin between Greenland and the Rocky Mountains into the Gulf of Mexico. As cold waters affect climate so this stream may have bred local glaciers, where snow wreaths still exist on Pike's Peak, which corresponds in latitude to Elburz in the Caucasus.

The American plains end at the semblance of an ancient coast. Their slope eastward is like that of the sea bottom off the eastern shore. The rocks of which the plains are made are little disturbed, and are nearly horizontal.

Fossils prove that the ocean covered the area in cretaceous times. East of the Rocky Mountains, so far I have explored

America, signs of Polar glaciation nowhere pass Lat. 37° N., and northern erratics extend so far south on a few meridians only. Facts gleaned between the Volga and the Rocky Mountains tell strongly against the ice-cap, and tell the same tale.¹

V.—AMERICA—WEST OF THE ROCKY MOUNTAINS.

WEST of Cheyenne the Pacific Railroad ascends gradually to 8,000 feet, and crosses to California over minor ridges, with

¹ July 30, 1875. Dr. F. V. Hayden, U.S. Geologist, whom I met at Colorado Springs in August 1874, has been kind enough to send me *Bulletin of the United States' Geological and Geographical Survey of the Territories*, No. 4, second series, June 10, 1875. In this excellent paper is a panorama of the first range of the Rocky Mountains. It embraces about eighty miles, and was taken from a point in the plains nearly twenty miles from the range. It is a very good representation of forms which I saw, of which I copied some. In these drawings, as in nature, forms due to aqueous erosion are as manifest as they are in the Caucasus; and everywhere else on clay banks after rains. On the small scale of drawings this identity of form is more apparent. These granite hills, like road-sides, or like volcanic cones, have been furrowed by streams.

November 29, 1875. On the 16th I received from Dr. Hayden the Annual Geological and Geographical Report to Government for 1874, of explorations made in 1873, which embraced Colorado and regions west of Pike's Peak. Fig. 8 is a geological map of the Middle Park. Fig. 9 is a sketch map showing glacial moraines in the Valley of Grand River, near Grand Lake, Middle Park. About lat. $40^{\circ} 15' N.$, long. $105^{\circ} 45' W.$, large moraines occur in the vicinity of lakes which are supposed to occupy basins. Fig. 8 shows clearly by the absence of moraines and lakes elsewhere in the region, that these marks can only record the movements of large local glaciers in America, near high peaks; near the latitude of Caucasian glaciers which still exist. The absence of Boulder Clay about these exceptional moraines in a cañon country suggests further examination. Erosion by floods must have been followed by transport and deposition of masses proportioned to the masses removed. The Report is an admirable work. It seems to demonstrate that no ice-cap has passed over this region since the opening of the Rocky Mountains; nor first upheaved

plains between. I watched while I could see, and noticed nothing glacial, local or polar, till near the western coast. Near Lake Tahoe, and a cluster of lakes in rock basins, and at "Summit" in the Sierra Nevada; near snow-wreaths in August, at 6,000 to 8,000 feet above the sea, I found fresh tracks of large local glaciers, which once flowed a long way down-hill towards the Pacific coast, and inland. They were not larger than glaciers which now exist in far lower latitudes in Asia.

Very few boulders reached the next plain, where the Sacramento and other large rivers flow. I could not find one large specimen of granite from the Sierra Nevada in the plains of California, or perched on the coast range near San Francisco. I could not find any northern drift at all on the Pacific slopes, or about the Yosemite Valley, or anywhere near Lat. 37°. I went northwards about 1,000 miles to the latitude of Devonshire, and found in the streets of Victoria the familiar shapes of ice-ground rocks, with striæ aiming north and south. These rocks underlie northern drift, which extends through Washington Territory to the Columbia River and Oregon. That drift I believe to be of marine origin.

I had learned from inspection of the country between the Caspian and the Pacific in 1873 and 1874 that northern drift and signs of polar glaciation in these lands and latitudes, are locally distributed; and do not extend southwards from the Pole on all meridians. Their distribution in Europe and in North America can best be explained by ocean circulation, like that of the Atlantic. Curves like commas (9) represent polar glaciation in Europe and in America, and in the Atlantic.

It seemed probable that local ice systems, like those of

Greenland and North America, have been moved to and from spots on the northern hemisphere, together with cold polar streams, which were diverted by the upheaval and depression of land.

VI.—AMERICA—RISE OF LAND.

THAT land in America has been disturbed, submerged and raised above the sea level repeatedly, is proved by fossils. The rocks in Labrador are greatly disturbed and altered, and are traversed by a confused network of dykes and bosses of granite, and other igneous rocks. Nevertheless, Laurentian fossils prove that some of them are true sedimentary beds deposited at the bottom of an ancient sea. Rocks of the coal formation in Nova Scotia and in New Brunswick prove that land there rose on which forests grew, and sank repeatedly to regions where fish swam. About the White Mountains rocks, said to be of Devonian age, are shattered and altered, and beds are tilted up on edge which once were horizontal. They continue to be horizontal westward in the plains. Further south, about Pittsburg, coal-bearing rocks are crumpled, folded, and faulted; but to the west of the east coast range, these beds are little disturbed. In Kansas flat cretaceous beds are worn and weathered so that fish and reptiles, and large shells peer out of their ancient graves to proclaim that the chalk ocean was there. Further north, in Iowa, cretaceous rocks, coal measures, Devonian and Silurian rocks, layer over layer, succeed each other in their order, according to the report of the State geologist. That indicates long intervals of time. Still later rocks and fossils prove that still later

seas have covered these Indian hunting grounds. Drift abounds in Iowa. Dr. White reports that it is of glacial origin. I suppose that it records the passage of the Arctic current of the last sea from which these American plains rose. It is part of the tail of a comma (9) whose head is the Arctic basin.

The whole shape and appearance of the country suggests a raised sea bottom. When nearing the Rocky Mountains the range is like a distant coast. The cliff and talus of the sea margin divide sandy plain from weathered rocks. The sedimentary beds which are flat in the plains, and in detached hills which stud them like islands, are raised at the edge, and lean against granite. At Colorado Springs the lowest bed looks burnt where it joins the granite. The lowest disturbed beds are said to be "Permian." If so then the rise of the first range of the Rocky Mountains is later than Permian times, and may be much later. At the level of the plains the forms of weathered rocks are those of rocks which sea waves are now wearing into needles, stacks, mushrooms, and beaches all round the world. Their level corresponds nearly to that of terraced rolled drift on the White and Green Mountains on the east side of the plains. Everything about the east side of America suggests a recent elevation of the land: fossils prove ancient submergence.

Soon after leaving Cheyenne the railway leaves the plains and crosses the highest point on the line at Sherman, 8242 feet. It there passes over an anteclineal axis. We passed a series of four beds dipping eastward, one White Sandstone, two Red, three Limestone, four Altered Rocks, then weathered Granite. Then the same series dipping westward, one Altered Rock, two Limestone, three Red Sandstone, four

white. The "Black hills" seemed to be an outburst of granite of the same age as the granite of Pike's Peak with the same beds, disturbed on both sides and with the same strike. On the west side we came down to "Laramie Plains," and to red and white rocks between hill and plain worn into the same fantastic shapes as the red and white rocks at Colorado Springs.

It seemed to me that we had got to the other side of an old island, and to the ancient sea coast. Thence, to the region of Salt Lake, we passed a continual recurrence of plains ending abruptly at cliffs and at the semblance of a coast line. Taking the run of rivers as a guide, the first Eastern, range of the Rocky Mountains, makes a lofty granite island in the midst of sandy plains, in which the older rocks contain fossil fish, shells and reptiles, and beds of coal; and are little disturbed. This coal region is said to be of miocene age. If so the land was under water in miocene times, for some beds are full of fish.

About Salt Lake, according to a local authority, the rocks are of lower carboniferous age. They are violently contorted. Amongst them are the same red and white sandstones, worn into the same fantastic shapes, at about the same level as the rocks at Colorado Springs, which there seemed to mark a sea margin at 6,000 feet above the present sea level.

Salt Lake is a deep basin, surrounded by terraces which mark ancient water levels. Above these the rocks are furrowed by mountain streams and cañons. There was no sign of glaciation about the lake. It has no outlet. In many ways it resembles the Caspian in miniature. The surrounding mountains are shaped like the Caucasus, and are equally water-worn.

No living creatures inhabit the bitter waters of the lake which are fed by fresh streams full of trout. The lake wastes only by excessive evaporation. There is no iodine in the water. Salt Lake is a puzzle to local authorities. I believe it to be a remnant of the sea from which America first rose. Hot springs occur, and the hollow may be volcanic; it certainly is not glacial so far as I can judge.

From Salt Lake westwards the same general forms prevail. Wide salt plains end abruptly at the terraced base of weathered sierras; "The Humboldt Valley" reminded me of the Rhine valley above Bingen. But right and left of this wide plain in which a slender stream meanders, wide dry flats open to the horizon. All the hills rise up weathered like the Greek islands, in a yellow sea of sand and sagebrush. The hills have weathered water-worn tops and sides, cliffs at points, terraces, and a long talus which slopes to the sandy plain. Shells only can prove whether these plains were levelled at the bottom of fresh or of salt water; the whole shape of the country suggests the action of water in late times.

In this strange dry region rivers meet to form lakes, and "sinks" which have no apparent outlet. The rocks of which hills are made are greatly disturbed, and vary in composition, position and age, but they are chiefly sedimentary rocks, which were formed under water, and once were as flat as the plains. They have been raised by geological disturbance, but since then they have all been worn to the same pattern by streams, which have scarce furrowed the plains. This region has been repeatedly sunk and raised. Since it last rose it has not been worn by local glaciers, or by the passage of the ice-cap. There is no sign of polar or local glaciation

about it. The last signs of Polar glaciation near the Railway were seen about Chicago, in the plains.

Near the end of the Humboldt valley are beds of lava and volcanic hills. Throughout the region of disturbance hot springs prove volcanic activity. Metallic veins and dykes of igneous rock occur amongst fractured beds where they have been much disturbed, and chiefly near granite ridges.

The last gradient on the Pacific Railroad is over the Sierra Nevada, and over an anteclineal axis.

Sedimentary rocks on the east slope dip eastwards; granite and syenite are in the midst; on the western Californian side the foot hills are sedimentary beds greatly folded, and locally much altered with a northerly strike. They are said to be of Jurassic age, but some are more like the hard Silurian rocks of Scotland. In these rocks occur quartz lodes, and their *débris* in rivers contains gold.

Recent sea shells occur in the Californian plains. The Pacific Coast range is one more series of beds greatly disturbed, with a northerly strike. The land has been raised from the sea in recent geological times, and it still is shaken by earthquakes. Indian traditions tell of violent alterations in the level of sea and land; sea shells in the plains prove that a late movement was upward.

The geological survey of California came to an untimely end, but cretaceous rocks with coal of that age were identified in the Pacific Coast range.

The Pacific coast, according to marine surveyors, is much terraced. A series of twelve horizontal shelves are cut in strata which dip various ways at one point. Elsewhere three or four shelves are recognized. No large stones

northern origin have been found on them south of Columbia River. Nevertheless these L shelves, which I suppose to be sea margins raised from the warm sea in which the shells lived, have been attributed to the action of a Polar glacier, which filled the bed of the Pacific, and rose to the level of the highest terrace on the American shore.

Throughout the journey from east to west the road crosses the strike of rocks in North America. Throughout it the appearance of the country suggests a recent elevation from the sea or the drying of lakes. It is demonstrated by fossils and by the position of beds disturbed and undisturbed that the region which now is North American dry land has been repeatedly sunk and raised. I suppose that the deposition of Polar glacial drift in the Mississippi region took place during the last marine submergence, I estimate the rise of land at the base of the Rocky Mountains at about 6,000 feet. Because I found no erratics west of the Mississippi, I suppose that lands in these regions were out of the course of marine Polar drift, or were above water when stones were carried to latitude 37° near St. Louis.

There is proof in American geology of rise and depression of the earth's surface amply sufficient to deflect ocean currents, alter local climates, and displace local ice systems equal in area to those which exist in the northern hemisphere.

Existing causes account for all the glacial phenomena that I have observed thus far, if marks of Polar glaciation in Europe and in North America are of marine origin.¹

¹ November 30. The Government Geological Report for 1874, above mentioned, shows by diagrams how rocks in these mountain ranges bent and folded till the lowest of a series sometimes became the highest. To that Report I refer geologists, as to a reliable authority.

VII.—AMERICAN GLACIERS.

A GLACIER may now form in any latitude if there be land there high enough to reach the limit of freezing, and if there be sufficient moisture in the air to furnish materials. One small glacier exists about latitude 36° in America. Another is said to exist about the same latitude on Mount Ararat. Much larger glaciers exist in the north of India between 27° and 28° N. at a level of 13,000 feet. It follows that marks of local glaciers north of 27° do not prove a general glacial period. They do but prove a local climate.

The present state of matters glacial on the American Pacific coast is shortly this:—From about the latitude of Gibraltar, in Europe, northwards to Sitka, a few glaciers exist on high grounds. In the south they are small, and far apart. In Alaska, from the latitude of London to that of the Shetland Isles, glaciers abound on mountains near the coast. Further north, towards Behring's Straits, no glaciers have been described. The country there is low, and like Russia, and most of the carrying work of ice is done in rivers in spring.

A local geologist lately described a glacier in the Sierra Nevada, south of latitude 37° in California. I did not see it. In that region I could hardly see a patch of snow on the highest mountains visible from high points near the Yosemite Valley. These "glaciers" are said to lie in deep gulches, and to have the motion of glaciers elsewhere; they are small, and confined to small areas. From description, I suppose them to be large snow drifts in a warm, dry region. An Englishman travelled 500 miles about the mountains east

of the Yosemite Valley in August, 1874. They saw many patches of old snow, and encountered a heavy storm of thunder and snow, but they saw no glaciers, and heard of none. The snowfall is considerable in winter. It supplies the waterfalls of the Yosemite, irrigates the Californian plains, and washes gold for the diggers. A little further north, about Summit, I found considerable snow-patches at 6,000 to 8,000 feet above the sea—one, near Lake Tahoe, seemed to be hard ice. Thereabouts the road is covered for many miles by snow-sheds, and the trains are often blocked by deep snow in winter. Near the track are lakes, great and small, in true rock basins, and lakes behind ancient moraines. The rocks are all rounded, and fresh striæ occur. Perched blocks and other glacial marks are about Lake Tahoe. A slight change of climate would soon convert these snow patches into local glaciers about Summit and Lake Tahoe. A slight change of climate probably destroyed the local glaciers of which I found the marks there.

Mount Shasta is a volcanic cone in the Californian Coast range. It stands about the latitude of Oporto, and Constantinople. I have photographs of the glacier which there ends at 9000 feet above the sea, on the N. E. slope of Shasta Bute. I saw the edge of it from below. The glacier is small. In the end of September, 1874, the north, west and south sides of the cone were so clear of snow, that bare ground reached the top between the patches. In 1873-4 Constantinople, at the sea level, was blocked up with snow; and wolves were driven in from the plains, to feed on town refuse. The Shasta glacier therefore is comparable to small glaciers on Mount Ararat, and in the western Caucasus.

Mount Hood in Oregon is said to be 17,000, otherwise 11,000 feet high. It stands about the latitude of Geneva. With a good telescope I clearly saw the riven forms of névé, or of glaciers, or of lava, beneath new snow on the west side of the cone. I believe that I saw a glacier, but I am not sure. None of these riven masses reached the timber line. That line, on the cone of Mount Hood, is higher than the highest parts of the Cascade range. The glacier region then ends above the general level of the hills. So far as I know, a few small glaciers only are perched on isolated volcanic cones south of Columbia River.

Mount Rainier in Washington Territory is at the end of Puget Sound, about the latitude of parts of the Alps. It is a cone about as high as Mount Hood. On the west slopes I saw larger masses of riven snow, or glaciers, or the shape of a recent lava flood under snow which came down nearly to the timber line. That line still rose on a cone far above the forest which covered all the lower hills in the range. I could find no one who knew the facts, but I suppose that no glaciers exist in the Cascade range, except on tall volcanoes—I think I saw glaciers on them, but I am not sure.

Mount Baker so far as I could make out for mist and distance was like the other snowy volcanic cones of the region. It stands about the latitude of Devonshire, opposite to Vancouver's Island, which was my northern limit of travel.

According to Mr. Dall¹ the first large glacier in Alaska is in 57° 0' 6" N. about the latitude of the Isle of Skye. Marks of ancient glaciers abound near the Culin Hills in Skye, and

Alaska and its Resources by Mr. William H. Dall. Boston: Lee and Shepard.

there tall volcanic cones once stood, according to Mr. Judd, who writes of the secondary rocks of Scotland.

Mount St. Elias is 16,000 feet high, in Lat. $59^{\circ} 33' N$. Long. $139^{\circ} 42' W$. It is about the latitude of Cape Farewell in Greenland where large glaciers exist, and of Southern Norway where old ice marks abound. An American traveller who had been several times to Alaska told me that glaciers slide off Mount St. Elias into the sea. The coast climate corresponds to that of Bergen on the corresponding Atlantic coast, where glaciers reach nearly to the sea. The following are means at Sitka for 14 years—1849-1862, Winter, $31^{\circ} 9'$; Summer, $54^{\circ} 3'$; mean temperature, $42^{\circ} 8'$ (Fahrenheit); rainy days 245. Annual rainfall, 83.33 inches. I could hear of no glaciers north or east of Alaska. The present state of the Pacific coast of America closely resembles that of the Atlantic coast of Europe north of 37° . Where the mountains are high enough there, a few glaciers exist near the coast, where the rainfall is considerable. They get down lower in the north and enter the sea about 60° .

The next question is—What has been the condition of the Pacific coast as shown by old ice marks?

Has the limit of freezing been lowered? Have glaciers entered the sea in lower latitudes? Has an ice-cap swept southwards over the whole land, scoring it from north to south?

VIII.—AMERICAN ICE MARKS.

THE Cascade range is attributed by American geologists to a rise in cretaceous times. In the Aleutian Islands still later tertiary beds lie horizontally on the flanks of volcanoes, and

contain abundantly fossil shells of living species. According to Mr. Dall and his authorities, the coasts of America and Asia are rising. If so, Behring's Sea may dry and the continents join north of Lat. 50° , opposite to Atlantic shoals between Europe and America.

Professor Agassiz found marks near the Equator which led him to believe that the Valley of the Amazon was filled by a great glacier. From these and other marks he inferred the ice-cap and the glacial period.

Mr. Belt found marks of local glaciers on mountains in Central America.

A local geologist has found marks which indicate the presence of a large glacier in the Yosemite Valley, south of 37° . I sought carefully and found no marks of glaciation there.

About the same latitude on the other side of the Rocky Mountains, I found marks of local glaciers about Pike's Peak.

Dr. Hayden, U.S. Geologist, whom I met there, told me that glacial marks abound to the west in the neighbourhood of certain lakes which are marked on the survey map about Lat. 37° .

There seems to be evidence enough to prove that glaciers existed in the Rocky Mountains, that land was raised or the limit of freezing lowered, or that the climate was somehow colder locally than it now is.

I found clear marks of glaciers at Summit in the Sierra Nevada, a little north of 37° . Mr. Dall says glaciers were larger of old on the coast of Alaska. Such old marks are common. I explained that an astrophysical glacial period. I

pose that some of them may be accounted for geologically the rise of land.

As the region between Behring's Straits and Alaska in fact risen, that water way into the Arctic basin been blocked, and that change is sufficient to count for a considerable change in climate on the Pacific coast.

If, as I suppose, the eastern plains of America have risen, the way into the Arctic basin has been further blocked on the eastern side of the Rocky Mountains. That change would further affect climate by altering the flow of cold air. The Arctic stream of the Atlantic may have reached lower latitudes, and may have bred local glaciers further north. But I could find no marks of Polar glaciation or of great glaciers in the Yosemite Valley; none in the plains of California, even below the lake district; none near Shasta Lake, or Mount Hood or Mount Rainier, where I thought I should find glaciers.

If the American geological dates are right, there has been a general glacial period on the Pacific coast of America since the volcanoes of Cascade range boiled up in early Pliocene times. If these lofty volcanic cones were swept away there would be no glaciers on the Pacific coast now, farther south than the Bergen Glaciers on the Atlantic, except the Californian glacier which I did not see. So far as I can judge, the present state of matters glacial on the Pacific coast and in the Rocky Mountains is near the maximum as indicated by old ice marks and new snow. No glacial mark that I know extends from the mountains into the plains in California or in Colorado; in Oregon or Iowa. I

saw no trace of Polar glaciation between the Mississippi and the mouth of the Columbia River.

I suppose that glaciers exist and have existed in various regions of the northern hemisphere chiefly because of local climate: because of the elevation of land, and the consequent direction of ocean circulation for the time; *not* because of the earth's position with reference to the sun, or the sun's position with reference to other stars in space.

I ceased to believe in an ice-cap when I had crossed America.

My faith even in a "general Glacial period" was rudely shaken in the Pacific, while stringing my facts together after travelling half round the world.

Now let me try to test the Glacial period by considering the largest marks, which I have yet attributed to glacial action.

IX.—DENUDATION BY ICE, FIRTHS, ETC.

I WILL not stop to argue that glaciers wear rocks under them. The majority of geologists know the fact: the minority would not accept my authority. Glaciers do wear rocks, and mark them. They would wear them more in more time.

In all countries where glaciers abound or have abounded, deep, rounded grooves furrow hill-sides, and these hold firths when they reach the sea-level. In Norway, in Greenland, and in Alaska firths abound. But south of glaciated latitudes firths, bays, and islands are rare on sea coasts. I believe that firths commonly are large marks of glacial erosion. The Black Sea near the Caucasus is devoid of good harbours. Of

al erosion even by large local glaciers I could find no there, or on the Pacific coast in California, Oregon, or hington Territory. South of 48° N. latitude in America are no firths, and few harbours of any kind exist south uget Sound. Professor Whitney, the Californian State ogist, reported that "no northern drift exists in California." Dall quotes Whitney : "There is nothing anywhere in ornia which indicates a general glacial epoch during h ice covered the whole country and moved bodies of tus over the surface, independently of its present con- ation, as is seen throughout the Eastern States." Mr. , whose own explorations were chiefly made on the banks e Yukon River, about the latitudes of Iceland near the ic circle, adds :—"The same is eminently true so far as now of Alaska." The same is equally true so far as I gone between the White Sea and the Caspian, the iterranean and Atlantic in Europe, and Asia ; between ilton Inlet in Labrador and the Potomac ; at St. Louis, rado, and Cheyenne ; between the Yosemite Valley in ornia, and Victoria in Vancouver's Island. Glacial denu- n in all these regions. Firths, lakes, and small marks ate local glaciers, not a general movement from north to of solid Polar ice.

at which I have seen shows that something like the ing state of things has long continued on this earth ; gradual cooling of the whole mass has not been inter- ed by a late period of intense cold, but that cold sea ents and their climates have produced the same results fferent regions which they now produce in Greenland, in ka, and wherever they flow. They lower the snow plane.

Firths prove that no ice-cap has passed southwards over lands where deep rock-grooves radiate to all points. The largest ice marks disprove the glacial period. That period must have bred large glaciers where small glaciers exist. But no firths are opposite to the small glaciers of the Sierra Nevada.

X.--THE WORK OF STREAMS.

"DENUDATION," in geological terms, means wearing of the Earth's surface to an amount equal to all beds of sediment.

Every agent that wears rock leaves a different mark. A glaciated valley has a rounded section \smile ; a stream cuts a V or Y. The action of a stream is slow, and the passage of Polar ice would efface marks made by streams. Where marks of aqueous erosion are large and old they disprove glacial action. The waves of the sea hack at the base of a mountain and so carve out cliffs, and plane off the mass which glaciers and streams carve and furrow. In sailing along any mountainous coast these valley sections are conspicuous. In Scotland and Scandinavia, which are glaciated, the mouths of glens and dales are rounded \smile . In the Black Sea, Caucasian valleys are all V-shaped. In the Mediterranean, along the Pacific coast of California, in the islands of Japan, and along the coast of China, Java, &c., all the valleys are V-shaped where the land is not glaciated.

The rocks of America, like all others, are much weathered and worn by running water.

The State Geologist of Iowa reports of that region between

the Mississippi and Missouri, that "all the irregularities of the surface are due almost entirely to erosion by streams."

The same author sets forth evidence of the glacial origin of drift in Iowa. The depth of furrows cut by streams is a measure of time elapsed since the glacial drift was spread on these plains, which I crossed in August 1874 between 41° and 42° N. latitude. I watched the plains carefully between Chicago and the Rocky Mountains, and came independently to the conclusion that most of the small irregularities of surface south of Lat. 42° are due to erosion by streams, not to glacial denudation. Whatever may have caused the depression of the beds of the great American lakes which end at Chicago, all these lakes have shrunk in their beds in consequence of erosion by streams which flow out of them. I believe that many like them have been drained dry by the same process.

River Marks.—The great western rivers all flow between bluffs, in alluvial plains, which are in constant motion. The waters are thick with sediment which the rivers wash from the land, deposit and remove, and roll seawards. All their feeders are like the great rivers. Every streamlet that crosses the railway track leaves a mark which is a copy in miniature of the greatest western river "valleys." Since the land was last raised above water, each stream has dug a trench through the plain proportioned to its size.

The St. Lawrence Valley contains recent shells and other marine fossils and drift. The river has dug a bed like the rest of its kind, proportioned to its size and age. It begun to dig after the land rose from the sea.

At Hamilton, at the further end of Lake Ontario, is a long,

even slope on which land streams have made little impression. It is bounded by a cliff or high bank about a mile from the lake shore. The high bank is the edge of a higher tract of country in which land streams have made considerable furrows. Beach and bank mark old lake limits, and measure the fall in the surface, which corresponds to the depth of the trench dug by the St. Lawrence at the other end. That part of the great river is not so old as the Niagara River. That stream has cut a trench at Buffalo. There Lake Erie is surrounded by a shelving plain which would be submerged if the channel at Buffalo were filled.

Niagara Falls have dug a cañon, a trench between bluffs from the cliff banks of Lake Ontario back to Niagara, and that cañon is working up stream. So far as my eye could measure it, the "horseshoe" at Niagara has gone back a long way since I saw it ten years ago. When the deep drain gets to Lake Erie it will dry, and the river will begin to dig in the plain which now is covered with water. The old lake shore will suffer the fate of the shores of Ontario.

At Detroit the river has dug a third trench which has lowered the level of Lakes Huron, Michigan and Superior. Old water levels are conspicuous on the shores of Lake Superior. Some of these are at considerable heights, and may turn out to be raised sea margins.

About Chicago at the southern end of this great system of lakes and rivers the ancient lake bottom extends far inland. That shelving plain is bounded by low broad smooth terraces which are old lake shores. They are miles apart, but their height is small. The water tower at Chicago is higher than any point between the lakes and the Mississippi.

ppi. The drain at Detroit accounts for the fall of surface Chicago. The shrinking of all these lakes is in consequence of erosion by streams. That "prairie" which was at submerged is smooth and devoid of forest within the old lake bounds. The higher "rolling prairie" has been longer out of water; it is wooded, and it is furrowed by streams and washed by rains. There is nothing in the direction taken by streams in these regions to indicate the previous movement of heavy ice from north to south. The wide hollow between Hudson's Bay and the Gulf of Mexico is the only meridional groove in eastern North America that could be attributed to erosion by Polar ice. As the State geologist reported, all the irregularities of the surface are due most entirely to "erosion by streams" which flow all ways. At the Mississippi or Missouri or any big plain river which has done work proportioned to its size and age, "bluffs" give a section of the plain country and measure the work. The action of running water is as manifest on the American plains as it is on a plain of sea sand newly ebbled dry, and freshly worn between tides by land waters.

Within the ancient bounds of the great lakes American geologists have found the skeletons of creatures mired in bogs; elephants, rhinoceroses, two-toed and thrice-toed horses and apes. They have found beds of leaves, and conclude from flora and fauna that the climate was not colder, but warmer when existing lakes were larger, and when large lakes existed which now are drained by the erosion of streams. But faciated boulders of northern origin abound in drift under the lake deposits; and under that drift are rocks of cretaceous age with marine fossils in them which indicate warm water.

The section is seen in the bluffs. We get this series about Lat. 40°, 42°, near Chicago : 1st. The existing state of things. 2nd. Higher lake levels and warmer climate. 3rd. Drift composed chiefly of rolled stones of northern origin, with a few large glaciated erratics in some regions only. 4th. Cretaceous and later rocks little disturbed with fossils, which lived in a warm shallow sea. All these reach far and wide in a country which looks as flat as the sea. As I read this record now, it means *not* the interpolation of a glacial period, but that these plains rose out of a sea like the Atlantic, during a period which was at least as warm as the present time. I hold that an Arctic current carried glacial drift south to Lat. 37° while the land was last submerged.

I see no place for a glacial period in this series which includes marks of Polar glaciation. I could find no sign of glaciation of any kind west of the Missouri, no moraine at the Rocky Mountains. Polar glaciation in the plains was local. All the irregularities of that wide surface are due, not to northern glaciation, but almost solely to "late erosion by streams." Their work is insignificant when contrasted with older mountain work done by them nearer to their sources where they have been longer at work if these plains have risen from the sea.

Cañons.—A cañon is a deep drain cut by running water. Arrived at the Rocky Mountains after crossing the plains, forms indicate long-continued uninterrupted "erosion by streams." The rivers which flow over the plains on wide beds, like those which land streams make on a sea strand, come out of deep cañons. Their dimensions are proportioned to the size of the streams and to their age, but all are of one

pattern. Miniature cañons are seen in every clay bank and hill-side. Niagara is a cañon. In the Rocky Mountains, as in the Caucasus, hollows of the same pattern abound of every size and in every material up to granite in the Yosemite Valley, and the Grand Cañon of the Colorado. At the end of deep cañons, about Colorado Springs, the river delta, made of great rolled stones, spreads on the plain like an open fan. It is not a moraine, for the stones are not glaciated. The sides of the narrow granite gorge are steep as walls, 600 or 700 feet high, and the cañon ends at a fall, which is working slowly back into the granite mountain. The cañon is a couple of miles long, and drains a "corrie," Y.

In the region about Carson City, the capital of Nevada, the land is dust in summer, and the rivers commonly end in "sinks," where they evaporate. Paints, ink, gum-water, and the skin dry up. The country, like those who travel through it, is parched by excessive evaporation. No shower of rain had fallen there between May and September, 1874, save one thunder plump. But that shower proved the eroding power of streams. The rain fell on a steep hill-side. The water guttered from all rills into one Y-shaped cañon, where a tiny rivulet usually trickles over a yellow rock. A farmer had built his ranch in the plain near the stream for irrigation. There the flood shot out of the cañon. In a few hours the farm was buried under stones of a ton weight, under gravel, logs, earth, trees, sand, and rubbish enough to make a new farm half a mile square. One house was swept away; another, built of wood, was turned round; the roads were destroyed, and then all returned

to the former state of cloudless serenity, and dried up. But the fan of stuff which buried the ranch remains there to show what erosion by streams really is, and how water digs cañons in these dry mountains.

As is the cañon at Niagara, so are the beds of rivers generally in the highlands of the Rocky Mountains. *Green River* flows over horizontal beds which American geologists date "Miocene." These contain beds of coal and fossil fish. The streams have cut narrow drains with steep walls through these beds. On opposite sides, the strata correspond; the bed of the stream is unbroken sandstone. The river course is not angular. The water winds through old, hard beds of sand rock, as water winds on sand in the prairie, or on the rippled sand beach which the tide has smoothed for streams to engrave. Since this plateau was last raised above water, these rivers have dug these cañons, of which many are at least 100 feet deep. But these are the head waters of the Colorado. After flowing more than 600 miles through a very dry country, the waters escape from the mountains into Californian plains through a winding cañon, which is said to be 6,000 feet deep, and little wider than the water way. I have not seen this Grand Cañon, but I have spoken with many who have explored it as far as they could get. They say that it would be as possible to shoot Niagara and live, as to descend the Colorado.¹

This grand sample of erosion by streams has a delta

¹ A book has been published in which is a circumstantial account of the descent of the Colorado by a miner on a raft. Certain recorded events appeared inconsistent with each other, and I suppose that the story is mythical.

proportioned to its size. The Colorado has dammed up the head of the Gulf of California. It has cut off an ancient sea-bottom which has dried up, and now is ninety-four feet lower than the sea-level in the Gulf. The land now is a dry desert, with recent shells in it, and beds of salt. When the flood waters of the Colorado partially irrigate this waste it becomes a garden. Dr. Wozencraft, of the *Great Republic* steamer, informed me that he long ago proposed to irrigate the whole tract from the Colorado. It has been proposed to let in the sea, in order to increase the rainfall, and so irrigate the neighbouring dry country indirectly. Meantime the Colorado delta remains in the Gulf of California, great in proportion to the depth and length of cañons which end only where the mountains end, and begin about the head waters of Green River, where I saw them from the cars.

This kind of erosion by streams is characteristic of all the mountain regions of America south of the latitudes of Puget Sound, so far as I have been able to learn. A drain 6,000 feet deep throws the date of the Glacial period far back. Whether I take marks which can be explained by glacial erosion, such as firths, valleys, lakes, &c., or marks which clearly are not glacial, such as peaks and cañons, I find nothing in denudation to suggest a general Glacial period in America or in Europe. In plains, shallow trenches are dug by rivers; at the end of the plains is the semblance of an old beach. In the mountains are deep drains cut by the same rivers which cut the shallow drains where I suppose a recent sea to have covered the land. On this supposed sea-bottom, and there only in some places, I find traces of Polar glaciation in glacial drift, which stops near 37°, the

latitude which icebergs now reach in the Atlantic. Supposing old Polar glaciation to be marine, existing causes account for all the glaciation that I have seen between the Volga and the Pacific.

XI.—BEHRING'S SEA.

Now let me look forwards.

It is proved that land in Europe and in America has been repeatedly sunk and raised. While it answered to the legal definition of "land covered with water," it was protected from all kinds of subaerial waste, and erosion by ice or by streams. But each time the land rose, erosion began again.

According to Mr. Dall and his authorities, land now covered by Behring's Sea has risen, is rising, and probably will rise above the sea-level and join America to Asia North of a line which corresponds to the limit of northern drift in Europe, the sea-bottom will probably ebb dry, like the margins of the American lakes, or raised sea-margins, or the sea-margin between tides. In latitudes corresponding to Northern Russia and Finland, great American rivers now flow westward into a shallow sea, which has been sounded for telegraphic purposes. The Yukon enters Behring's Sea about lat. 62° north. The description of a season passed thereabouts closely resembles a description of climate about the Dwina or Neva. The summer is short and hot, the winter long and severe. The rivers freeze and become roads. In spring the ice goes with a rush, carrying frozen *débris*, stones, and mounds of leaves and mud to spread on the flat bottom of

a shallow sea. Each flood is like the Nevada flood, aided by ice and by the sea. Leaves and shells prove that rolled drift on Puget Sound has risen from the sea. The sea has cut through it, and now is forming terraces under water which are seen from passing ships in calms. The submarine delta of the Yukon grows in yearly glacial freshets, and by a continuous muddy flow. The shores of Puget Sound give sections of drift which seems to have gathered in the same way. The Alaska glaciers which enter the sea in the latitudes of glacier tracts in Norway, now launch and scatter volcanic boulders from the coast range. Within the narrow limit of their marine glacial drift, the result must resemble the country about Vladikafkas, where large Caucasian stones occur on a large river delta, which leads back to a small glacier at the foot of Kasbeg. Like it the old raised marine drift of Puget Sound contains a few large erratics, but none of volcanic origin. That deposit seems to have grown as the delta of the Yukon is growing, but before the growth of the volcanic coast range.

If Behring's Sea-bottom does become dry land, the surface of it will be like the plains of Russia, the American plains, and the drift regions on the Pacific coast. According to soundings, shelving slopes and flats are surrounded by volcanoes, against which Tertiary and other beds have been tilted up or bodily raised. If the sea retires the river Yukon will follow it, cutting a trench in the submarine delta, like that which the St. Lawrence has cut from Lake Ontario to the Gulf. On the banks of the growing river, and on the growing margin of the shrinking sea, "Polar glaciation" will be recorded only by anything which ice may now carry

through Behring's Straits. As no Polar drift has been seen south of lat. 50° N. and the Aleutian Islands, modern Pacific northern drift will end at least thirteen degrees further north than modern Atlantic drift. Near Alaska local marine glacial drift will be represented by a few stones of volcanic origin, dropped from small icebergs near the shore. If the glaciers melt they will leave moraines and their marks on the hills. Water-marks and ice-marks in the valley of the Yukon will lead through plains of sand and mud to a raised sea-margin, to long deep rounded grooved hollows, to the volcanic coast range; and to the volcanic sierra whose tops now are the Aleutian islands and Alaska. Polar marine glaciation represented by erratics or by the trail of a stranded berg in the plains will lead back to Behring's Straits, and to the rocks from which the boulders came.

The new country will be very like old lands which I have lately seen. The shallow trench dug through sand and drift by the muddy Mississippi leads back to the shallow Platte and to the deep water worn cañons of the Rocky Mountains. They must be old, because deep, the rivers lead back to the semblance of a sea-margin near the hills, to fans of boulders to something like a moraine at Pike's Peak. But if the sea were back there, it would have no firths on the Rocky Mountain coast. Boulders in one part of the Mississippi Valley and there only lead back to Canada, and to the Arctic Basin, over plains which I believe to have been under the ocean when the boulders were carried to 37° near St. Louis.

Manifestly land now covered by Behring's Sea if raised will be very like land in Washington Territory which has been raised or land about the base of the Rocky Mountain

which I believe to have been raised. The valley of the Yukon will be like the valley of the St. Lawrence; the country near it like Russia east of Finland, about the Dwina, or Neva, or Volga.

In the probable case of Behring's Sea even Polar glacial marks will not record a glacial period. The marks which I saw in the same latitudes about the White Sea and the American lakes in 1873 and 1874, seem to record something like the present climate of Behring's Sea. If so then the period of Polar glaciation is present. An ice-cap may be growing but the glacial period is nowhere in the past.¹

¹ My friend Mr. Belt, author of *The Naturalist in Nicaragua*, and other works, printed his opinion on the glaciation of America in the *Quarterly Journal of Science*, in April, 1875 ("Niagara, Glacial and Post-Glacial," by Thomas Belt, F.G.S.). He believes in a Glacial period, during which the bed of the Atlantic was occupied by a glacier. The whole Eastern Coast of America, down as far south as New York, must have been blocked up by it. A glacier came out of the bed of the Atlantic up the Valley of the St. Lawrence from the direction of Greenland, and went over the watershed down towards the Gulf of Mexico. The same author accounts for drift in the plains of Russia by a dam of Polar ice which caused great lakes to gather there, and about Niagara apparently at the same time. He dates the Glacial period 20,000 years ago. He gives reasons for his belief, which merits all respect due to the creed of an able man who has seen a great deal of the world.

At the latest meeting of the Geological Society in June, 1875, a paper was mentioned of which a condensed abstract appears in the Report: "On the Superficial Geology of the Central Region of North America, by G. M. Dawson, Esq., F.G.S., Assist. R.S.M. Geologist to H.M. North American Boundary Commission."

The rules of the Society, and the work that they have to do, often delay the publication of papers ordered to be printed for many months. The information contained in a paper written by a field geologist, who described an arc of a circle round the Pole about lat. 49° in America, would have been very instructive for me, who described an equal arc some ten degrees further south, and joined the two circles by travelling up and down both coasts to striated rocks.

I quote from the first abstract printed for subsequent condensation :—

Mode of Glaciation and Formation of the Drift Deposits.—The author did not find any evidence rendering the supposition of a great northern ice-cap necessary, but suggests that local glaciers on the Laurentian axis furnished icebergs laden with boulders, which were floated across the then submerged prairies towards the Rocky Mountains.

The Rocky Mountains themselves show abundant traces of glaciation . . . but striation was only observed in a single locality, and there coincided with the main direction of the valley."

Professor Dana has been kind enough to send me "Notes on some of the Phenomena of the Glacial Era, and their Origin : in Book Notices" (*American Journal of Science*, vol. ix. 1875.) The paper shows the stronghold of the ice-cap and Glacial period in books. Professor Dana's own well-known books, and his remarks in this paper, indicate his opinion.

The Glacial period appears to have begun to wane in North America.

XII.—THE PACIFIC AND ITS CLIMATE.

OCEAN circulation is much hindered in the Pacific, but laws which govern it in the Atlantic are good all over the world. Behring's Straits are but fifty-four miles wide, and generally less than 150 feet deep. Behring's Sea is shallow. About the latitudes of Ireland and Newfoundland, the way into the Arctic basin is further blocked by long spits of volcanic land, and by sunken land of the same kind ; by chains of volcanic islands with shallow straits. About the northern tropic are groups of islands and shoals. New Zealand, Australia, &c., hinder the Antarctic water way. Nevertheless, the North Pacific has an Arctic and an Equatorial current, and a circulation like the Atlantic. A diagram drawn on board shows the temperature of sea water at the surface taken every four hours in crossing westwards from San Francisco to Yokohama on the *Great Republic* steamer, October 2-29, 1874. It

temperature rose from 57° near the American coast, to 79° about longitude $154^{\circ} 22'$ E., and fell to 71° near Japan. Inside of Japan was the cold stream hugging the coast of Asia like the cold stream which hugs the American coast inside of Newfoundland in the Straits of Belleisle.

The *Costa Rica* sailed from Yokohama on the 3rd October, and reached Shanghai on the 10th. The lowest temperature of sea-water observed, on the 4th, near Kobe, was 66° , the highest was 77° . On the return voyage, October 15th to 24th, the lowest temperature was 66° near the same place, the highest 75° . On the next voyage from Yokohama the lowest temperature was on the 29th, after a deluge of heavy rain, near the harbour. The surface was 61° outside in the Equatorial Stream; the sea still was 70° to 66° . These four voyages in the same month show that climate in the Pacific is greatly affected by ocean circulation.

On the 8th of September the *Costa Rica* sailed from Yokohama for Hong Kong, running against the Pacific "Gulf Stream." The water ranged 80° , 76° , 82° , 83° , 84° , 77° , 79° , 83° , 84° , 85° , 87° , &c., &c. The vessel reached Hong Kong on the 16th. The coldest water was near Yokohama at 8 noon and 4 P.M. on the 8th, 77° , 76° , 77° . The hottest was at noon on the 16th, near Hong Kong, 87° . The air then was 88° , in the saloon it was 88° , in the after hold 92° . The average water temperature of the voyage was about 83° , the range only 11° . At the same time on the American side the average sea temperature was 57° and near Yokohama, Kobe, and Shanghai it was 61° or thereabouts. The warm water runs up towards the N.E. because displaced by cold water. These observations prove the fact.

In January 1875 I crossed the Inland and Yellow Seas in the *Costa Rica* and took these observations from the log. At Yokohama the temperature in the bay was greatly affected by cold land waters and by wintry air. The sea was 45°. Outside, the warm stream was 63° near the place where it was 66° to 70° in summer. There was a difference in climate of 18° within a few hours' sail. At that time while Yokohama waters were 45°, the mountains were covered with snow and ice, and the air was 25° or less. There was a difference of more than 40° between the winter climates of small Japanese islands, and of glens inland. In the narrow inland sea of Japan, temperature fell from 51° at Kobe to 46°. On entering the open China Sea it rose 4°, but still was 13° colder than the open Pacific. On leaving Nagasaki we got Pacific water at 60° during eight hours. Having crossed that lane we ran to colder water, and to the great river Yang-tse-Kiang. The water was 40°. It blew a gale, it snowed and froze, the weather felt colder than Lapland about the lat. of Suez, near Shanghai 31° 12' N. Lat. 1° 21' 30' E. Long.

It was thus practically demonstrated that climates are greatly affected by ocean circulation. On islands off Yokohama the temperature was 63°. At Yokohama it was 45°, on the hills 25°. In the China Sea 60°, near the coast in the cold stream 40°. Japan was warm on the coast while China was frozen. So Iceland has a mild climate while Greenland has an unsurveyed coast, and is almost inaccessible from cold; all because of oceanic circulation. The shape of land under water and above it affects the direction of movement of the sea. According to a late American survey for tele-

graphs, the sea near Japan is about five miles deep, and a strong cold current there flows southward under the warm stream which flows towards the north-east. Near the Japanese coast in shallower water, hot and colder lanes move side by side as on the banks of Newfoundland.¹

In the transactions of the Asiatic Society of Japan, 22nd October 1873 to 15th July 1874, are papers on marine circulation, on deep sea soundings, and on the meteorology of Yokohama. A given bulk of sea water is heavier at 33° than it is at 85° and must therefore displace lighter water and cause circulation. Captain Belknap, U.S. Navy, gives the following sample of temperature near the Tropic in the North Pacific. It gives the mechanical force which is the difference in weight between water at 33°.2 and 76°.

No. 39, Lat. 23° 31' N. Long. 161° 51' E.			Feet deep	660	66·63
Surface		76°	„	720	65·02
Feet deep	60	73·5	„	780	63·91
„	180	73·48	„	840	61·08
„	300	73·67	„	900	61·02
„	420	73·45	„	1,080	59·98
„	540	70·24	„	1,200	58·56
„	600	67·83	„	18,000	33·02

Temperature² and weight account for movements from and towards the Equator and Poles. The earth's eastward

¹ The soundings made by the *Challenger*, published in the *Times* of June 23rd, 1875, confirm the accuracy of this sounding. The results of the expedition, when published, will settle questions as to oceanic circulation which bear upon climate.

² The temperature of maximum density of sea water as settled by Despretz in 1837 is 25°·4 F., according to a paper by Mr. Prestwich. *Proceedings of the Royal Society*, No. 154, 1874.

rotation changes the direction. Chilled heavy water flowing towards the line lags behind and moves westwards and southwards over larger circles of latitude. Warmed light water revolving eastwards at the rate of the Asian coasts nearer to the line, displaced and lifted by heavier Polar waters, moves faster eastwards than smaller circles of latitude which it crosses in flowing northwards. The surface current in fact flows towards the north-east, past Japan, while the under current flows in the opposite direction.

The shape of the basin determines local currents, eddies, and back streams. Captain Belknap reports that the bed of the North Pacific, where then explored, consists of shelving plains of clay, ooze, sand, pebbles and shingle; with occasional mountains. One near California is 4,000 feet high. Six submarine elevations, ranging from 7,000 to 13,000 feet were found west of the Sandwich Islands. The sea-bottom has hills and plains like dry land.

It has been shown that Europe and America have risen above the sea-level, Asia also has been submerged. Japan is a plateau like that of Thibet, five miles higher than sunken Pacific plains; with volcanic cones on it rising 14,000 feet higher, like peaks in the Himalayas, about which large glaciers form; at greater distances from the earth's centre but far nearer to the Equator. A paper by Dr. Stoliczka read June 24th, 1874, before the Geological Society in London, shows, by describing marine fossils, that Asian land about Kushgar near the latitude of Japan has been submerged and subjected to volcanic action, and raised. In like manner as it appears, Asian land in Japan has bulged outward though not so far as in Thibet.

The North Pacific lies in a deep, rugged hollow surrounded by volcanoes: in the Sandwich Islands, in Java, in the Philippine Islands, in Formosa, Loochoo, and Japan, in the Aleutian Islands, in Alaska, in Oregon and California. Northwards, in Behring's Sea, the basin is shallow and the water is chilled. Southwards, the China seas and those about the islands are shallow, and there near the Equator water is heated to 87°.

Because the shape of a basin governs the movements of its contents the "Japan Stream," which is hindered by shallows in the north, sweeps round the Aleutian Islands, Alaska, and Oregon instead of entering the Arctic Basin. Like the Gulf Stream, it turns southwards about Lat. 50°.

Captain Brown,¹ in treating of winds and currents in the vicinity of Japan, shows that this "gulf stream" of the Pacific does send a small branch called the "Kamchatcka Current" through Behring's Straits. It leaves the main stream about Lat. 38° N., Long. 150° E. A cold current, named Oya-siwo, of small breadth and volume, comes from the north, along the eastern coast of Yezo. It is the equivalent of the "Arctic Current" of the Atlantic. It so affects climate that the Asian coast, about the latitude of Oporto in Europe, is fast bound in ice for twenty miles off the land during the whole winter.² Where these small streams of hot and cold water meet about the Kurile Islands, about the latitudes of Lisbon and London, fogs are as prevalent as they are off Newfoundland and Nova Scotia, where hot and cold

¹ *Op. cit.*

² This has been denied, and confirmed by other authorities. The question will be settled by surveys now at work.

streams meet and mingle in the Atlantic. The cold waters of the inland sea and of the Yellow and China seas are chilled by northern waters flowing south-westward through narrows, and hugging the Asian coast as the Atlantic cold stream hugs the American shore. The result is the same. Climate in China and in Labrador is colder than in Japan and Newfoundland, and ocean circulation is the immediate cause.

Circular storms, typhoons, and cyclones follow the track of these ocean streams on the corresponding coasts of America and Asia. Monsoons blow from north-east and from south-west according to the sun's position at different seasons. They do not affect the circulation of the Pacific to any great degree. Atmospheric and oceanic circulation obey the same mechanical laws. Both result from solar radiation, and must have produced like effects on climate ever since the sun shone upon the world.

According to Dr. Hepburn¹, climate in Japan is in fact much influenced by oceanic circulation. In Lat. 35°, 26' N., near the latitude of Gibraltar and San Francisco, at Yokohama the rainfall is above the average of most countries. Two-thirds of the whole fall between April and October. The snowfall is very light. Ice is seldom thicker than an inch and a half. The average temperature of seven years was 58° 22. The average rainfall 70.30 inches. The number of rainy days varied from 78 to 114. Compared to Alaska with 245 rainy days, or with Oregon opposite, this rainfall is insignificant. Compared to California it is excessive. All are influenced by the same oceanic circulation. The great

¹ *Op. cit.*

Pacific stream warms Yokohama and the whole Pacific side of Japan. The northern side is chilled by cold streams. Birds, beasts and fishes, fauna and flora, differ on opposite sides of the Japanese hills. Rivers which flow northwards teem with salmon; none are found in beautiful rivers which enter the Pacific. Sea fish also differ as fish do that flourish in hot and in cold water.

At Yokohama, near the warm stream the snowfall is light. Inland more falls. On the hills I had a rough winter, and walked nearly 200 miles in deep snow, and on frozen ground. My glass often marked 26° . When I crossed to the northern side of these wintry hills, I found deep snow and hard Christmas weather in plains as far south as Granada, the garden of Spain. The difference was caused by warm sea water on one coast and cold on the other. The limit of freezing is raised and lowered in the air, by the movements of sea water about Japan.

Because no wide water way now opens into the Arctic Basin, no Marine Polar glaciation now goes on south of Behring's Sea. Instead of reaching 37° , heavy drift ice has not been seen below 52° in the Pacific. There is nothing like the heavy drift of Labrador and Newfoundland on the Asian coast. But Kamschatka is equivalent to Greenland. The results of circulation are the same in different degrees. The Asian coasts are colder than the opposite American coasts. The Atlantic American coast is far colder than the opposite European coasts. A region of clouds, fogs, and storms is at the meeting of hot and cold waters all round the shallow edge of the deep basin which holds the Pacific and regulates its circulation by its shape.

The circulation does in fact influence all coast climates and moves glaciers. As in Norway, so in Alaska the climate is even moist and warm on the western side of the coast range next to the warm sea. There also glaciers grow on the hills. As in Devonshire and Normandy, so in Washington Territory the climate is soft, moist, mild and warm. So far as the influence of the warm stream reaches inland, and southwards on the American Pacific coasts, there moisture and warmth prevail, and the coast range of hills is misty. Great rolling masses of cloud tower high above the coast range in Oregon. They condense and fall as rain in the next hollow. The people in Oregon say that it rains for 13 months in the year, and their dusty neighbours call them "Webfoots." Their crops never fail; their apples brag the world. Beyond this happy valley in Oregon the Cascade Range, with its volcanoes, catches more of the mist of the Japan stream and distils rain and rivers, snow and glaciers. Beyond that range the next plain is dry and dusty. In that region of Oregon grapes flourish and flocks graze on yellow dried up hills and plains. Beyond that region even the Sierra Nevada fails to condense a cloud for months. Clearly, all this variety of climate in parallel bands of the same tract results not from astronomical changes or anything more complicated than normal circulation in sea and air. In California the "Golden Gate," where land waters meet the warmer sea, is commonly curtained by mist. The evening sea breeze covers the low heights of San Francisco with a nightly cap of chilly clouds. It never is excessively hot or cold thereabouts. But even there condensation rarely gets beyond mist. The next plain is dry and hot. Crops often fail there for lack of moisture. Grapes

flourish. Beyond this plain the mountains are very dry. Between May and September, 1874, only one slight shower of rain fell in the Yosemite Valley. It was considered a phenomenon and caused catarrhs. The falls then were mere rills. But for a few distant snow patches the rills would have dried. A little further inland rivers end in sinks, or feed lakes which evaporate, or dry up in salt plains. The sea air has been dried, and the sea has been cooled at the surface in flowing round the North Pacific.

While it rained little in California, in 1874, rain poured on continuously in Oregon. California was yellow dust, and heated stone; Oregon was green with rank vegetation, slippery with mud. Californians were burned as brown as their dusty fields; men of the same breed in Oregon had rosy fair pale faces. Meantime in Alaska rain poured, and the local "Glacial period" flourished there. North of Alaska was the climate of Russia. In the Northern Pacific islands the sun was hidden by thick mists and sea fogs. In Japan the sun shone or rain poured according to the wind. When I got to Canton I shivered in the tropics: when I got back to the warm stream off Hong Kong the sky cleared and punkahs wagged in the cabin to modify excessive heat.

I learned practically by travelling that climates are greatly affected by ocean circulation, and that the presence and absence of glaciers may depend on local climate.

Within its limits the North Pacific circulates like the North Atlantic; its currents affect coast climates in the same way. If the water way into the Arctic basin ever was opened wide enough, Marine Polar drift may have reached 37° without any change in the world's climate. Because large erratics are

near St. Louis, and marks of large glaciers near San Francisco, and because a glacier is on Shasta Butte in California, I crossed the Pacific expecting to find northern drift and moraines on the opposite coasts in Japan.

XIII.—JAPAN.

THE first thing I saw in Japan was a mountain as big as "Shasta" or "Mount Hood;" of the same form as Etna; a volcano, covered near the top with snow. It was Fuji San, commonly called Fujiyama. It is the favourite subject of Japanese artists and poets; it is holy, and a place of pilgrimage, and traditions tell that it grew within the memory of the races who inhabit the country. I landed expecting to find glaciers on the mountains, glacial boulders as common on the shore as they are on the eastern coast of America, and tracks of glaciers as plain as they are at the base of Snæfell in Iceland, which is a small copy of "The beautiful mountain Fuji San."

The empire of Japan has not been geologically surveyed. It consists of a numerous cluster of islands which stand off the Asian coast as the British Islands stand off the coast of Europe, and Newfoundland off America. Yezo in the north corresponds in latitude to the Crimea, and is about as large. Kiusu in the south is near the latitude of Alexandria. Between 129° and 144° east longitude a long range of narrow mountainous islands divides the great Pacific Equatorial stream from the small Arctic current and from the northern cold waters of the Japan Sea and the Yellow Sea.

Off Japan the Pacific is five miles deep. The Japanese Mountains separate districts in which climates Flora and Fauna differ widely. The plains between the sea and the hills appear to have been raised in late geological times. Recent sea shells are in a steep bank of stratified sands near Tokio, the capital. That bank is an ancient sea-margin. It was a notable feature of the coast first seen outside of Yokohama, and I traced it along the coast for a hundred miles at least. From that bank the land slopes gradually towards the hills, for about ninety miles. Since this plateau bulged large rivers have done little work on it. They are kept within bounds by enormous earthworks, and their waters are spread on rice fields. Considerable deposits of gravel line the flanks of the hills at many places. I took them for raised sea-margins, but I found no shells. The general shape of these Japanese lowlands is like that of ground which has been smoothed by water.

Earthquakes constantly occur. They average one a month at Yokohama. I felt one at Tokio, and one at Kioto, three hundred miles further west. Many Japanese volcanoes either still are active or were active within historic times. One island mountain smokes in the Pacific off Yokohama. Fuji San is a full-sized copy of the largest of the cones in Oregon. It is visible from Tokio more than seventy miles from its base. Like Monte Nuovo near Naples, men saw it grow. The story is that it grew in one day.

Asamayama, about eighty miles to the north of Tokio, is constantly blowing off steam through a polished tube. It may be about 10,000 feet high. Nan Tai, distant about ninety miles from Tokio, near Nikko, is a mountain of the

same shape, with a crater lake and beds of basalt at the foot. As far as I could see in clear weather from Nikko, I saw cones like volcanoes rising from plains. Yes, it is volcanic, and strewn with pumice and ashes. So far as I could make out, the hills are made of folded beds of altered crystalline rocks, through which volcanoes have broken along lines of fracture on the strike.

I travelled 90 miles north to Nikko, about as far S.W. on the Tokaido, or east coast road, to Mianoshita; and through the heart of the country westwards 325 miles to Kioto, the ancient capital, by the Nakasendo, or Middle-Mountain road. I went to Kobe, otherwise Hugo, and steamed thence through the inland sea to Nagasaki. Thence I steamed across the Yellow Sea to Shanghai. I had the good fortune to meet travellers, who gave me information as to other parts of the empire of Japan.

I was always expecting to find moraines and striae, and looking out for glaciers on Japanese hills. I passed through a small Glacial period. Heavy snow fell; my glass marked 27° indoors. The sun shone, the snow melted and froze again, and glazed the whole land with a clear slippery variety of ice. More snow fell, and heat and cold made a season out of glazing. Then the sun got the better of it on the southern slope on a fine day, and my road became pouchoe mud. Then frost got the best of the battle behind a hill or at night, or under cover of a cloud. Then the road became a very rough rock, very hard to walk on. In the low grounds this state of things did not exist; 2,000 feet made the difference.

I found marks of erosion by streams. I found V valleys

on hillsides, in all materials of all sizes, up to long glens. The country is subject to great floods, their marks are by the rivers and in their deltas.

The islands seen from the sea are like the Greek Islands, steep hills fluted by streams, great and small. Where the coast is sheltered, these V furrows enter the sea, as they enter the plains at the foot of the Rocky Mountains, and in California, where the coasts are exposed to the waves of the ocean, as they are about Enoshima and Nagasaki; there the coast-line is battered into the usual coast forms of cliffs, with eaves, and outliers broken into spires, needles, arches and stacks, like those which abound off the west coasts of Ireland and Scotland. "The Arch Rock" at Nagasaki, "the Arch Rock off San Francisco," "the Needles" off the Isle of Wight, and "the Garden of the Gods," at the foot of Pike's Peak, are all of one marine pattern. I saw water marks familiar to me from childhood everywhere in Japan.

I was always expecting to find marks of glaciers, where I saw the foundations of glaciers laid daily and hourly in thin layers. But familiar glacial marks there were none that I could be sure of on these frozen highlands up to about 6,000 feet.

The Japanese fashion is to build wooden houses, and to plant their chief posts upon big stones. The palace of the Mikado, in the very heart of the castle at Tokio, was so constructed, and it was lately burned. The stones had been gathered from all parts of the empire. Some stood in rows where the palace had stood, others were made into rockeries, in fishponds, and in those quaint gardens in which the Japanese delight. One stone was a fossil tree sent from a great

distance to the Emperor by a great prince; most of them were granite. If there be a glaciated boulder in Japan, it ought to be in this great city built on stepping-stones. I never passed a likely stone without examination. I did not find one glaciated stone in three months. I found about temples and sacred places great numbers of large, smooth, oval rolled masses of granite and igneous rocks, which might be erratics. Many of these are inscribed. The legend often is a record of the feat performed by some athlete, who lifted the stone long ago, or is now performing. When I got to the hills I found stones of the kind piled up by floods at the end of cañons, or spread in fans on the plains. I was finally driven to the conclusion that these are water-worn stones. I could find no inscription to record that ice carried one of them.

Saghalien, in the latitude of England, is frozen to the mainland yearly. The sea is frozen off Yezo, in the latitude of the Crimea. Tokio is not much further south than the Gulf of Pechelée, which freezes.

I still expect to hear that some geologist has found marks of glaciation on some of these large stones at Tokio. As the sea is frozen a little further north, sea ice may have helped to move these rounded boulders south. I found few of them near Kioto, Osaka, Kobe, or Nagasaki, inland about Lake Biwa, or on the sheltered south coasts of Japan, where earthquake waves still do exceptional work, and where typhoons commit terrible havoc. These great egg-shaped stones puzzled me, and puzzle me still. The record on the hills or plain.

There is not one single hog-backed ridge or rounded hill — on the Nakasendo road. I saw no mark of erosion

that cannot be accounted for by water floods, like that Nevada flood which smothered a farm in 1874.

From the Missouri to Nagasaki there is nothing whatsoever to indicate polar glaciation about lat. 37°. There is nothing between the Volga and the coast of Europe to show that polar ice passed south of "the limit of northern marine drift." Along my western course, between the Caspian Sea and the coast of China, I saw nothing to prove any world's climate colder than the present. Instead of finding marks of polar glaciation on all meridians, I found no signs of an ice-cap on any one of 285 meridians which I crossed in 1873-4-5, about lat. 37°. When I had got so far and found that polar glaciation now is marine, and old marks of it local, I ceased to believe in an ice-cap. When I found that those local marks coincide with the present limit of northern drift in the longest water way now open, I concluded that polar glaciation is, and always has been, marine in low latitudes. When I had passed Japan in deep snow and biting frost, without finding any mark of any kind of glaciation on the hills, I was driven to believe that the limit of constant freezing never has approached nearer to the earth's centre, and that the present is the coldest period which this world has borne.

If this quaking earth, which shivers on opposite sides of the wide Pacific, and spouts hot water and molten stone all round the margin of that sea, and through it, is a heated mass cooling and shrinking within a wrinkled skin of altered rocks, its time for cold and rest ought to be coming on—not passed away.

XIV.—THE INLAND, YELLOW AND CHINA SEAS. JAPAN TO CHINA AND SINGAPORE.

THE temperatures taken January 21—29, 1873, between Yokohama and Shanghai, show that the shallow waters west of Japan are affected by the seasons, by inland waters and by the Arctic current. A hundred and fifty miles off the China shore we met the mud of the Yang-tse-Kiang, which flows from Central Asia eastward, and is one of the largest rivers in the world. A storm came on; water froze on deck; and the next morning the masts were yellow with mud up to the cross-trees. The river was thick with mud, the banks were mud, and the land was but drier mud with wet places in it, covered with thousands of old grave mounds. I did not go up the river, but for 700 miles it flows through the same flat alluvial country. It passes one small range of low hills below Hangkow. There are no large stones about the river or on its banks. I could hear of nothing glacial about this part of the world, except cold, wintry weather, and snow storms near the latitude of Suez and Alexandria. The sea was frozen, and navigation stopped about Peking. I saw only the result of erosion by one of the largest streams in the world, and a growing delta near Shanghai. But large glaciers abound in the region from which these great Chinese rivers flow.

In February we ran from Shanghai to Hong Kong against the Equatorial Stream, before the north-east monsoon. From

water at 40° in the mouth of the river, we ran to sea water at 51°, rising to 54°, 60°, 68°. The air temperature rose from 40° to 59°. One result of a cold wind blowing over warm water was sea haze, and thick weather clouds were low on hills, and damp and mildew everywhere: water which had cooled to 63° off Yokohama, was 68° off Hong Kong. We were near the edge of the great upper Equatorial Stream of water; in the Arctic under current of air. Ships beating to windward keep further out in the stream; they go outside of Formosa, and pass the Loochoo Islands with the warm moist climate which goes all the way to Oregon.

I went inland 100 miles to Canton, stayed there a week, and never saw the sun. We crouched over fires in the tropics, and shivered at 49°, because the warm sea was too far off to warm the polar N.E. wind. It blew chilly and damp, and filled the air with clouds and haze. A hundred miles eastward at Hong Kong, temperature ranged ten degrees higher. On the 18th February we left Hong Kong and mist, and passed seawards into summer heats within a few hours. The water rose to 80°, so we passed to the climate of the stream, which we crossed twenty-five degrees further north in October at 79°. It was again demonstrated by a sudden change from winter to summer, that climates are greatly affected by the normal circulation of air and water.

I carefully watched mountain forms on this part of the Asian coast, and saw no sign of glacial action. But where ice now forms near the sea level, tropical glaciers must have grown in a general Glacial period. I saw part of a Δ delta whose sides are about 90 miles long, growing amongst water-worn, weatherbeaten hills of red sandstone and granite. I

saw erosion by streams, and strata folded and fractured, and mountains hewn out by water and weather.

The tropical cold of China drove me to believe that the present is the coldest Glacial period in the world's history.

Singapore.—The steady under current of the N.E. monsoon followed us from Shanghai to Singapore; an upper current of water which comes past Borneo flowed to windward on its way to Oregon. But it got warmer as we went south. On the 20th and 21st February water was 78° to 80° air about the same, and rain at 73° fell from higher regions of rain falls in the tropics. Where such floods fall, where rivers begin on hill tops, full grown streams and cataracts, erosion must be in proportion. If one Nevada stone moved half a square mile of rubbish in a few hours, stones in the deltas of tropical torrents may rival moraine stones in size. Our engine broke and for two days we drifted within five degrees of the line. We sounded in 45 fathoms, and brought up gray mud like chalk full of minute shells and fragments of small creatures that flourish and float in water at 80°.

Ten or a dozen sharks gathered about the ship. We were in a warm shallow sea teeming with life, like that from which the cretaceous rocks of Kansas were deposited. But the warm waters in which life so abounds flow past Japan over water chilled nearly to freezing. Giant crabs, conchs, and tropical shells live near the frozen seas of northern Japan. This modern living, floating chalk formation may reach glaciated boulders in the North Pacific.

The Straits.—About the Straits of Malacca the sea-surface

has risen. The mark was conspicuous on both sides. High hills were conical ; some I take to be extinct volcanoes. At Singapore the rocks are red and yellow grits and sandstones, much disturbed. I found no fossils. But recent shells and coral sand are under the gardens at the foot of the bank which marks the old sea-margin. Granite is found in a neighbouring island. Here close to the Equator I sought diligently for marks of that ice-cap in which I had been told to believe. I found nothing that could be assigned to glacial action.

The climate is damp and hot : people, vegetation and landscape, sea and sky are tropical. But the Arctic N.E. wind with its chilly bursts of cool rain blew steadily on to show that Arctic water and weather may reach the line if the way is open.

I have shown above that water at 33° , does reach the northern tropic in the Pacific under the warm stream, and that still colder water underlies water at 87° at the line in the Indian Ocean.¹

XV.—JAVA.

I CROSSED the line from Singapore to Batavia in March, and the Arctic wind followed towards the vertical sun. Great pillars of cloud covered the sky by day, which turned to pillars of fire by night. Thunder growled, blue lightning

¹ The results of the *Challenger* expedition stated in the *Times* of June 24, 1875, show that a great layer of cold water underlies the warm surface water of the Pacific. My old inductions have been tested experimentally and are true. See *Frost and Fire*.

flushed, and rain poured as it pours in the wet monsoon. I, a West Highlander, never saw such rain before. The coasts which I saw were long flats, covered to the water's edge with dark green jungle. Conical hills rose like islands in the forest. Round islands rose in the sea, crowned with trees. We passed whole palm trees adrift in the warm current. The sea grew warmer. It was 82° in the Straits of Malacca, 83° near Banca, 84° near Batavia, 85° near Samarang. There was nothing whatsoever near the Equator to suggest the presence of the Antarctic ice-cap.

There was much to suggest a late rise of land over a wide area. The shapes of the hills are volcanic or water-worn; the low grounds like a sea bottom, the islands were like the tops of hills surrounded by coral walls and shining beaches of white sand.

From Batavia I went up 800 feet in 40 miles to Buitenzorg. There from March 9th to 14th we lived in a temperature of 75° to 77° , at the base of a volcanic cone 7,000 feet high, which was clear only once for a few hours. The air was thick with moisture, the rivers were red with volcanic mud swept down by the constant drizzle and heavy rains which fell continually. The colour of this tropical landscape was greyer than the West Highlands; the sun shone less than it does on the Argyllshire hills in mistiest winter weather. But when the clouds opened the sun shone with might.

In the famous botanical gardens I got seeds which drift to Novaya Zemlia; one plant of the *Entula Scandens*, a native of Java and Ceylon, is ten years old. The creeper has a small leaf and flower, and grows a pod near three feet long. At the root it is as big round as a man's body. It climbs

the top of a high tree, swings thence like a ship's cable to a clump, and spreads over it for more than a hundred yards from the root. I had got to one place where seeds grow which I have gathered from distant sea coasts. They start near the straits where the Equatorial stream of the world divides. Small branches enter the Indian Ocean. The stream rounds the Cape of Good Hope and becomes the "Atlantic Gulf Stream." The main branch, turned by the islands, and by the Malay Peninsula, flows round the North Pacific. It starts at a temperature of 86° . I crossed it off Japan at 79° . Equatorial water keeps the sea open near the entrance of the White Sea, where I crossed it in August 1873.

In these same Java gardens a mountain stream has worked havoc, rolling great stones of volcanic origin down towards the plains. On the east side of the mountain tropical rains have cut a deep ravine from the crater, to the plain proportioned to the size of a delta below the cone. The stones were equal in size to stones moved by alpine glaciers. I sought carefully and found no sign of glacial action on stone or rock. I crossed at the foot of Pangarango an extinct volcano on whose summit Wallace found an isolated northern flora growing. He accounted for it as a remnant of the Glacial period. If the seeds of *Entada Scandens* float to Novaya Zemlia, seeds may float from Greenland to Florida. When the Asian coasts were sunk, northern seeds might float from Kamchatka to Java in a Pacific Arctic current. Birds might carry them to hill tops and to the cool tropical climate in which these plants now flourish. A primula seed entangled in thistledown might fly with the N.E. monsoon from Northern Asia to Pangarango. One great gift presented by a native

prince to the Dutch was a sea-nut. It was the double cocoa-nut which grows only on the opposite coast in the Seychelles. The tree now grows in the gardens at Buitenzorg. That same double cocoa-nut has drifted to the British Isles. It does not require a Glacial period to account for the transport of small seeds to the top of a newly grown volcano. I travelled 300 miles overland in Java, and found no sign of glaciation. I found marks of floods and the floods themselves, and signs of recent elevation of land. I saw volcanoes in abundance and heard of a recent outburst of volcanic mud which did great damage at the eastern end. Heat, wet, bad roads, and a broken carriage sent me to sea at Samarang.

On the return voyage to Singapore we passed a "bar eater" 150 miles from the nearest land. Land-birds are commonly seen on this voyage. We met hawks and small land-birds a couple of hundred miles from Japan. Narrow straits cannot bar the passage of flying creatures. The sea was covered with land-drift washed down from Borneo and Sumatra. Large palm trees were abundant; flowers, fruits and leaves in the strait which opens to the Indian Ocean. On the beach at Singapore I picked up many drift fruits but after a long search I failed to get a "Malacca bean" in the Straits. At other seasons these seas are covered with drift moving westwards from the Archipelago towards Java and Sumatra, the Straits, and the Indian Ocean. Tidal currents set in and out, but the drift current sets westwards and generally prevails in the narrows.

XVI.—CEYLON.

I SAILED from Singapore April 2nd, and reached Galle on the 7th. The sea water was 85° all the way. Rocks at the end of Sumatra, exposed to Antarctic waves, are battered into the usual forms of stacks and spires. The mountains about Acheen seemed to be volcanic cones; the low coast lands a raised sea-bottom, with battered rocks in the forest. I had the fortune to meet a gentleman who had been surveying in Borneo. The low, swampy coast jungles there have isolated granite "Tors" in them. He saw nothing glacial and nothing volcanic, so far as he travelled in Borneo.

Ceylon has not been geologically surveyed. The mountains rise from a broad plain, which surrounds the mountain district. The plains end with a white sandy beach, in which are battered rocks. Many rocky islands of the usual surf-beaten forms stand off the eastern coast, with a tall lighthouse far out in the sea. Rocks in the plain have the same forms as rocks in the surf, and at sea. If the sea-bottom were raised, it would be an extension of the low lands of Ceylon. From the steamers, while approaching, and while leaving the island, I saw from a distance the usual marks of erosion by streams on the hills, and of marine erosion in the plains and in the surf. I travelled along the eastern coast seventy miles from Galle to Colombo on a plain, thence by rail and coach to Newera ELLIYA 105 miles, up 6,500 feet. I went to the highest point in Ceylon, the top of Pedro Tullagalla, 8,000 feet above the sea. Thence—riding, driving, and walking—I travelled southwards through the hilly coffee

districts to Kandy. Thence we travelled northwards down hill to Dambool, and out into the plains to Anuradhapura and Kurenegalla, to Negumbo on the coast. Thence I returned by Colombo and to Galle. I travelled nearly 60 miles in Ceylon between April 8th and May 17th. I could find no mark of glaciation whatsoever.

The rocks near Galle are red sandstones and grits, greatly folded with a northerly strike, very like the rocks at Singapore. I could find no fossils. These beds are traversed by dykes near Galle. The beach is constantly beaten by a heavy surf, and the rocks are worn with lime sand. Harder beds of dykes rise in the surf, worn and rounded. Their shape varies with the composition of the rock. Where the beds are on edge, and the dip nearly vertical, the rock is fluted and channelled vertically. Where the beds are horizontal, the softer parts wear horizontally. But the action of sand and water rounds the rock by ceaseless slow waste. Whenever I saw a rock in the surf on the coast of Ceylon, it was rounded smooth boss. On the railroad, in the hill country, and so far as I travelled northwards, the rocks are crystalline gneiss, greatly folded and contorted, with the same northerly strike. On the Peak the beds dip 72° N.E., and strike N.W. S.E. Garnets abound there; gems are found in gravel elsewhere. I saw large plates of mica and glittering stones of divers sorts and colours. Beds of marble occur near Anuradhapura. The sculptured stones of that ancient capital are hewn out of crystalline white limestone, which weathers red. In the north of the island are recent beds of coral. As I have said, the beach is sand. Sand underlies mud and soil near Colombo. Cinnamon and cocoa-nuts grow in

of the same kind far inland, near Negumbo. Further inland the loose soil of the plain is chiefly made of small angular *débris*, weathered off the gneiss which is close under it. I saw no gravel on the beach. I could find no beds of gravel, no clay, and no fossils, and I could hear of none in the plains inland. I suppose that all the sand was washed off this plain of crumbling gneiss. The plain rivers, which rise twenty to thirty feet in floods, leave beds of angular sand when they fall. Only near the hills I found rolled stones in river deltas and in water-courses.

There are no lakes in the hill country. About 1,300 tanks have been made in the low country by constructing "Bunds" in hollows. Lagoons surround the coast. They are natural tanks, banked seawards by sand thrown up by the surf and, overgrown to the water's edge with cocoa-nut palms. In these shallow hollows land waters gather, and boats sail hundreds of miles close to the sea-beach. There is nothing like a firth on the coast.

The only rock basins are pot holes and "giants' tubs," which occur in water-courses and about rocks which stud the plains. There is no sign of glaciation in Ceylon. But ice forms at Newera Eliya when the sun is south of the Equator. On the 12th of April, when the sun was nearly vertical, the temperature on the grass at sunrise was 52°. A general Glacial period must have lowered the freezing limit here, and water enough falls to make big glaciers. Ten inches fell in twenty-four hours on the 10th of April at Colombo.

The mountains are everywhere seamed with V ravines cutting through the hard gneiss in all directions. There is not one rounded hollow or hog-backed ridge in Ceylon. ()

The low grounds which I saw I took for very remarkable examples of marine denudation. Ceylon at the end of Asia is exposed in all directions save one to the full sweep of the waves of the Southern Ocean. The surf rolls constantly in over a shelving bottom. At the sea-margin and thence to the hills the shelving surface cuts indifferently through all the folds in the gneiss.

Where a hard spur extends northwards on the strike from the mountain district, it is prolonged in the plain by isolated hills and bosses of the same hard stone. Some are near 2000 feet high. These rise like islands in the jungle. Some are square like "the Bible rock," and some are furrowed by streams like rocks in Galle harbour, some are rounded, and are bare gneiss weathering to angular sand, and wearing into chemical and mechanical potholes. On some few of these great blocks of the same stone are poised like rocking stones in Cornwall. I could hear of no "erratics" and I saw none. I attribute these blocks to weathering.

The Elephant rock at Kurene-galla is somewhat like a couchant elephant; from some points of view it rises 700 feet above the plain. The gneiss there is much contorted: the dip is nearly vertical, and the strike and long axis of the hill are northerly. Distant hills on the same strike are broken to the westward. Great part of this strange rock is bare. It shells off in thick layers which correspond to the curved surface, not to the bedding. To avoid slipping on a slope of 30° I walked down barefoot, and realized the effect of tropical heat. I could hardly endure the heated surface. To a given depth the gneiss is daily heated to 100° or more. At night it cools. Expansion and contraction produce some

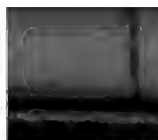
thing like cleavage and fracture on a crackle cup. Mechanical and chemical action of rain and air make the surface crumble.

Fresh and growing pot holes are in the bare gneiss. "The King's bath" on the Elephant rock is a round basin about 20 yards wide, full of rain water and rotting leaves to make acids. The stream which flows out of this natural bath is wearing smaller pot holes below. Such rocks weathering and worn stud the plains of Ceylon.

Caves commonly are sea marks. They occur at considerable heights in the rocks. The rock at Dambool is 350 feet higher than the plain. Near the top is a cave under a ledge walled in like a miniature copy of Magaspelion in Greece. It is a rock temple. Inside are images of Buddha and his disciples, the fabulous Naga Rajahs, and mythical or historic kings of Ceylon. Roof and sides are covered with painted legends and ornamental designs. No weathering goes on there now. The painted roof has the shape of many a well-known sea cave in which I have slept. The look-out from the hill top over the green jungle with its gray archipelago of gneiss rocks suggests a sea on the plain. This cave and others like it may be of the age of the coral rocks in the north.

A rock temple at Anaradhapoora is hewn out of a shattered worn mass of rocks like rocks in the surf. It was sculptured by the hand of man some two thousand years ago, but the surface on which elephants were then carved in low relief still bears the marks of sea waves.

These rocks, plains, and hills of Ceylon are remarkable. They might easily be mistaken for glacial work. After



careful study, I believe them to be the work of the Indian Ocean, aided by a tropical sun and tropical rains.

The folding of the gneiss was by lateral horizontal pressure from E. and W., nearly parallel to the Equator.

XVII.—THE INDIAN OCEAN.

If ever the world was covered with ice, marks of it ought to be found in the southern hemisphere, where Polar and drift ice now come nearest to the Equator, in latitudes corresponding to old marks north of the line or in still lower latitudes.

The southern portion of the ocean which is bounded by Asia, Africa, the Malayan Archipelago, and Australia, and which beats on Ceylon, has a system of Antarctic circulation. In the "Indian Ocean," under the line, cold water at 30 flows under surface water at 85°.

There are no glacial marks in Java or Ceylon, and so far as I know none have been found on the African coast between the Cape of Good Hope and Cape Guardafui. The general system of atmospheric circulation goes on above the Southern Ocean: N.E. and S.W. monsoons follow the sun over the line. The circulation of water goes on in the same fashion so far as the shape of the hollow permits the water to circulate.

We fell in with the S.W. wind on the 20th of May, about nine degrees north of the line, when half way between Ceylon and Aden. The wind was due at Ceylon about that time, and it was the same breeze which brought

rain and thunder, and lowered the temperature 7° to 79° . The water grew warmer as we got to the western side of the basin. It was 85° to the east of Ceylon. It was 86° in spite of the colder rain of the monsoon. It was 88° at Aden. For some days it rained heavily, and blew in squalls. The sea rose, the rain beat down the sea and smoothed the waves. It thundered often, and waterspouts whirled past northwards. The sun rose astern amongst detached clouds like islands in the east, a rainbow arch on dark blue rain clouds, and a darker sea was ahead to the west, in the monsoon.

We steamed into the flank of the Antarctic wind which had followed the sun over the line so far towards the northern tropic, bound for Asia, to carry the rainy season to India and to build glaciers between 27° and 28° N. We crossed the path of the same wind in the same wet weather, till we sighted Socotra and Africa. Then we got to dry weather, variable winds and a clear sky with high tropical clouds in it. We had gone through the weather by which Germans explain Indian mythology. Cape Guardafui and the islands near it are bedded rocks broken into sea cliffs and little disturbed. There was nothing glacial about their forms.

XVIII.—ADEN AND THE RED SEA.¹

ADEN is part of a large broken crater. The axis of a uined cone is in the harbour. Seen from a distance beds

¹ I learn from a Paper by J. Milne (*Quarterly Journal of the Geological Society*, No. 121), read January 1875, while I was in Japan, that the bottom of the Red Sea is rising. Reefs have shoaled four fathoms within twenty years in the Gulf of Suez. If that is a fact the canal will dry up; as it has not dried, the fact needs proof.

on both sides dip away from the axis at an angle which records the existence of a mountain as large as the volcanoes of Oregon, Japan, or Java, say ten or twelve thousand feet high; or of a crater as large as the base of such a cone, like Tankaban Prow, which has not yet grown to the full height of its neighbours in Java.

Sea water at Aden was 88° , the sky clear, and the sun's rays very powerful. On the beach I found a recent formation of sand, shells and broken coral. The rocks on which this rests are volcanic, bleak, barren, weathered and shattered, with beds of blown sea sand in hollows. The great Aden water tanks were dry for lack of rain, and water stills were at work on sea water imitating nature whose fire is in the burning sun.

Why are these tanks dry, and why is Arabia a parched waste within a few hours steaming of the recurring rain floods of the south-west monsoon? South-west of Aden, on mountains high enough to be cool, are swamps and great lakes which feed the Nile. The S.W. wind drops its load of distilled sea water on these condensers, about the line, in Africa. Aden is dried up and the Nile overflows in Egypt because water raised by the sun in the South Seas is condensed in Africa, before the S.W. wind gets to Arabia. Daghestan also is dry, because the south-west wind is dried before it gets to the Caucasus. The Caspian Sea, though fed by the Volga and other large rivers, keeps down its level by evaporation. Salt Lake is shrinking in America, so is the Dead Sea in Palestine. All because of atmospheric circulation, and the position of land raised high enough to catch and condense fresh water distilled from the salt sea by the sun's rays.

On the 26th of May we passed a group of volcanic islands in the Red Sea, north of Aden. Some truncated cones are nearly perfect. Other hills are finished cones three or four hundred feet high. Others are fragments of broken cones and craters weathered into strange shapes like Aden, but with their conic structure manifest in all sections. In some are recent faults and fractures. On the sides of many of these island hills waves have made cliffs.

About 1 P.M. on the 26th we passed Gib-el-teer. It is nearly round, from two to three miles in diameter, and about four to five hundred feet high. On the chart it is marked as little more than a mile wide. It certainly is far wider now. It is surrounded by a raised sea margin. From it rises a low perfect dome of dark volcanic rocks, cinders and thin white beds. On the top of the dome are two small volcanic cones. In the top of the highest is a small white crater broken to the north-west, from which some mineral spring has flowed leaving a white curved mark amongst the black ashes on cone and dome. This island has certainly risen bodily. Probably the raised beach and the long hollow slope below it mark a very recent elevation of this volcanic area. Where I could see the coast further north, I saw conical hills and a low raised sea margin. That sea mark is conspicuous at Suez. The whole isthmus would be submerged if the Red Sea were at its old level.

Except in the Westmanna Islands, off Iceland, I never saw volcanic forms and sections of them so numerous and conspicuous in a small area on a small scale. I had never heard or read about these islands. These monuments of recent volcanic activity and of enormous waste at Aden may

account for recent sea shells, and beds of rolled stones in the sands of Arabia and Northern Africa, and for the older bedded rocks which are well seen in hills near Suez.

This part of the world's crust has bulged outwards, for these older bedded rocks have been bodily raised in the bed of the Red Sea; and the crust has broken, so as to let volcanic fountains of fused stone rise. Igneous rocks abound on the Sinaitic peninsula, and between Aden and the Caucasus: between Gib-el-teer, Etna, Stromboli, Vesuvius, and Santorin. I saw a bed of basalt in a scarped hill near Suez. A prolongation of the hollow which holds the Red Sea cuts through the volcanic area of the Greek Archipelago, where volcanic eruptions, and earthquakes, and movements in the earth's crust, have raised and lowered the sea margin on islands within the last few years.

The world's crust is in motion on opposite sides of Asia, about the same latitudes in Greece and in Japan. Rocks at Singapore and in Ceylon have been crushed from east and west between two long lines of volcanic hills, which indicate fracture in the crust under them. I take the Red Sea to be a mark of a fracture in the crust. On it we met a strong, north-west, cool wind, which blew steadily for five days along a course of 1,300 miles. We had the same wind nearly all the way to Marseilles. Not one of the cloud forms which had been common all the way from Hong Kong remained. I have never seen these cloud forms out of tropical regions. The temperature of sea-water fell from 88° at Aden to 70° near Suez. Air temperature fell from 86° to 71° . Water in the shallow bays and lakes was 74° in the Mediterranean, 75° to 70° 1


1. The temperature of the water in the Red Sea when tested

Along the coast of the Red Sea from Aden to Suez, a raised sea margin proves that the Mediterranean once joined the Red Sea. The whole tract has bulged outwards, raising bedded rocks more than 2,000 feet, which still are horizontal or slightly inclined at Suez. Erosion by streams is a marked feature of these dry Egyptian hills, as it is in dry Daghistan or in Nevada. On the shores of the Caspian and Black and White Seas, and all round Scandinavia, I saw raised sea margins on opposite sides of the plains of Russia in 1873. I returned to the Mediterranean from a round of the world in June, 1875, satisfied that northern glacial drift in Europe is marine, and records a recent elevation of this European area by the forces which still cause the earth's crust to bend and break in Japan.

South of the limit of northern drift in Europe I saw no signs of glaciation in 1873 in Russia, in the Crimea, in Turkey, Greece, Italy, or France; in 1875 I saw none in Egypt or Arabia or on the coast of Africa to Guardafui, in Sicily or on the coast of Corsica. I saw none in Ceylon or Java, in China, Japan, or California. Neither north nor south of the line could I discover a mark of an ice-cap or a record of a general glacial period.

XIX.—CAUSES OF GEOLOGICAL CHANGE.

ACTIVE causes of Geological change which I have seen at work are those which must have long acted. I mean the normal circulation of air and water on moving solids. The sun's heat rays now suffice to make gases and fluids circulate.



Where these rays have least power, there water freezes. The earth's heat does not suffice to warm water five miles below the sea level in the Pacific. But the earth's internal heat, and cold outside, do move the crust on which ocean and air are moved by the sun's rays.

Movements in the crust alter the direction of movements in the ocean and in the air; and so affect climate, evaporation, and condensation locally. The surface is most worn where most rain and snow fall on it, where the largest rivers and glaciers flow, and where the largest waves beat hardest. The waste of worn land gathers in hollows. The hollows become high grounds where the earth's crust breaks and bulges outwards. Hills sink into hollows, and may become islands, or disappear in an ocean where the crust folds inwards. Raised beds of sediment with their fossils are the crumpled stone books from which geologists translate chapters in the world's ancient history. Antiquaries and historians read for later chapters, but geological changes still are slowly going on. Earthquakes at Yokohama are as real as the ancient ruin of Pompeii. It is work fit for astronomers and men of science to explain still older chapters, to account for and explain the secular cooling of the earth and its effects on the surface of the globe.

I have found no geological record of an astronomical glacial period in travelling westward from the Caspian round the world through Egypt to England.

XX.—FRACTURES AND VOLCANOES.

THE Nakasendo or middle mountain road of Japan led me past the base of a volcano called Asamayama. It is a truncated cone, shaped like Vesuvius in 1842. For more than twenty miles on each side of it the soil is made of alternate beds of red and white pumice and ashes. I suppose that 400 square miles may represent the area which was covered partly within the memory of old men. I estimate the height of the mountain at 10,000 feet above the sea. On the southwest are a series of six or seven broken rings—the remnants of older and larger cones and craters like Somma. Great cliffs of basalt, near a thousand feet high, face one glen through which I passed on my way from the plains. Pumice cone, craters and basalt were all thrown up from below. In December, 1874, cone and country were thickly covered with new snow. I did not try to go up. It was cold below, and the hardy natives said that a man could not speak for cold on the top of their mountain. I found it hard work to wade through snow on the road. Through all this snow and cold, enough steam was blown through the crater to drive all the engines in Japan. Hot springs are numerous in the whole region. The needle was affected near the mountain. About thirty miles from it is a rock of magnetic ironstone to which picks and shovels adhere. Fuji San and a neighbouring island in the sea, Asamayama and Nautai are four great volcanoes on a curve of about 180 miles. So far as I could make out, they are on the strike of folded beds of altered rocks which only show in deep water courses. These

volcanoes are on a fracture in the earth's crust. Westward of this fracture are large tracts of bedded granite, amongst which occur the famous rock crystals of Japan. Newer rocks, all much fractured and folded, extend westward for three hundred miles, as far as I travelled.¹

Great as the force of volcanic action has been and is in this region, the force which bent and broke the older rocks of which this part of Japan is made was far greater. It is an active force, for the earth still is shaken by earthquakes. The earth trembles almost incessantly. Every now and then it shakes down houses, and makes trees bend as in a storm of wind. Land levels altered lately in the plains near Yokohama, so that a river course in the plain became a pool of standing water. The crust of the earth was bent or tilted up. The ground opened so that a road became impracticable and had to be remade. The crust there broke. This is now going on in Japan, which is a plateau five miles higher than the basin of the Pacific near it.²

Fractured and crumpled beds of sedimentary rock, and volcanoes active and at rest, extend from beyond Java to Japan, and thence all round the North Pacific to America.

¹ Mr. Judd, in his paper on the "Secondary Rocks of Scotland," of which part was spoken January 21st, 1874, and the whole printed in August, 74 (page 399): "The great intrusive masses being, as it were, the roots of a tree of which stem and branches and leaves are represented by the dykes, lavas, streams, and cinder piles of great volcanic cones."

In this case I suppose that the bedded granite will turn out to be part of the stump of a ruined cone like those which still bud and blossom in the snows.

² On my return I found the Geological Society busy with questions about subterranean forces, and their action on rocks at great depths. These forces are busily working and altering the surface in Japan now.

There from Alaska down to Cape Horn rocks are bent and broken. Hot waters and vapours, and hotter lava rise from below; the earth quakes and portions of the coast rise and fall, bend and break.

The first experience of an earthquake is apt to suggest new thoughts even though the shock may be no greater than the rumbling of a dray cart on a paved way. Land in Europe, in America, in Asia, and in Africa, has sunk and risen, rocks deposited flat have been bent and broken. The first earthquake shock demonstrates that which disturbed rocks record. The world's crust still is in motion. "It has a core of fire and a crust of fossils."¹

The plains of Russia which I crossed in 1873 are little disturbed, but rocks of which they are made are tilted up in Scandinavia, in the Caucasus, in the Alps, and in the Ural Mountains. As the earth's crust is in motion, these plains may have bulged a little so as to shift the bed of the sea. A line of fractured sedimentary beds altered and disturbed, and of granite and other igneous rocks protruding through fractures in the crust, extends from the Atlantic Coast of Ireland, eastwards to the coast of China, at Amoy and Hong Kong and elsewhere. In Japan rocks are crumpled and faulted, and there also igneous rocks fill cracks. There along the strike of folds in sedimentary rocks volcanic cones have risen, and through them hot water, and smoke, and steam, and lava rise continually. The new feature in my experience was that I felt the earth's crust moving under me, and heard the houses rattle over me, and awoke to think once more why the earth's crust moves.

¹ Oliver Wendell Holmes in *Elsie Venner*.

Anteclinal ridges and synclinal troughs and faults in the Pacific Coast range, in the Sierra Nevada, in the Rocky Mountains, and in the Atlantic coast range of North America agree in general strike with the main lines of volcanic activity there. As in Europe so in North America—which I crossed in 1874—sedimentary rocks have been little disturbed in wide tracts between wrinkles. The earth's crust has bulged there enough to move the sea from the place where shells and fish lived, in cretaceous times at all events. There the crust appears to be at rest now. These spring waters are cold, and volcanic action is unknown. But old fractures and wrinkles cover the face of the globe. It seemed to me when I felt the crust move and heard it in Japan in two cities 300 miles apart, after travelling there from the banks of the Caspian, that nothing less than a general slow contraction of a cooling world can explain the sidelong crush which has crumpled rocks on the scale which I had seen on my round. Manifestly if all folds in the crust which I had seen were smoothed, the world's circumference would be greater. The world has shrunk. Because of volcanic activity the globe must be hot within, because it has contracted it must have cooled. But if it was hotter, where is the place for a glacial period? If it existed where are the marks? I had sought them in vain.

Mere volcanic action, great as it is, will not account for nearly parallel wrinkles extending from the Atlantic Basin to Cape Horn, between the Atlantic and the Pacific.

Between San Francisco and Fraser River volcanic action is conspicuous for more than a thousand miles upon the American line of disturbance along which I travelled. The coast range contains beds of coal said to be of cretaceous age.

It consists of beds much altered, disturbed and fractured. In them occur ridges and dykes of granite and porphyry, and metallic veins. The Sacramento River flows inland from this range past the base of the volcano called Shasta Butte. The sands of the Sacramento contain gold, but no gold has been found in any feeder that flows from the cone of Shasta, or from any other volcano. The gold came into the altered rocks of the coast range with quartz before the volcanoes grew.

The Cascade range is nearly parallel to the coast range in California, in Oregon, and in Washington Territory. It consists almost entirely of basalt and other igneous rocks. These beds are three or four thousand feet thick where I passed them on the Columbia River. In plains in these regions basalt covers the whole country. From the mouth of the Columbia River to the Dalles the river banks are basaltic or alluvial. All neighbouring hills that I reached are igneous; so are all the rocks over which rivers fall in the plains of Oregon. Floods of fused stone have poured over each other at long intervals, burying in turn old surfaces on which trees grew, rivers ran, fish swam, shells lived, and life abounded on dry ground. They seem to have come from a long fault. In the Cascade range sheets of more recent lava have cooled, have broken and sunk down, and have been raised like lavas in Iceland. The world's crust has bent and broken there. Further east are more flats of basalt, and of lava, and dry plateaus seamed by deep cañons. Smoking volcanic cones, hot springs, spouting geysers and other signs of volcanic activity prove that the world is hot under the winter snow in North America all the way from the sea eastward from Oregon to the head waters of the Yellowstone, and the

"National Park," which Dr. Hayden discovered, explored, described, and tried to preserve. At the east side of the Rocky Mountains are hot springs. The area of volcanic activity is very wide in North America. High above the Cascade range of basalt tower snowy cones of lava and ash which reach 11,000 feet, 14,000, and even greater heights. All that I saw were of one pattern, finished cones with the longest slope to the south-west. They came through the older basalt on the axis of the range singly and in groups. Some smoke and are active, some are at rest, but hot at the top; one has a hot sulphur spring in the crater, another has scattered ashes far and wide in late times. They are volcanoes like those of Japan or Iceland, or Java, or Sicily, or the Sieben Gebirge near Bonn; or like those old volcanoes which Mr. Judd inferred from their remains in Skye, Mull and elsewhere, in Scotland.

Instead of one Etna standing 10,874 feet high, or a group scattered over an area as big as Ireland with Hecla for chief, 5,000 feet high; ten or twelve cones as big as Etna, or bigger, stand in line on a ridge between the Sacramento and Fraser rivers. But the broken line of this fiery regiment of giants surrounds the Pacific from Cape Horn to the end of Java. Many of the same tribe are in Africa, and some are within the Antarctic circle. When weather is clear in Oregon, one or two or three of these cones appear from their usual cloud coverings glittering above the lower blue ranges of basalt and dark forest, shining like clouds in the blue sky. Some are a hundred miles from the next of the kind, but basalt makes the line continuous. In calm clear evenings each cone is apt to condense a small cloud canopy. I have seen a row of grey clouds high up in a hard clear sky.

answering to the place of snowy cones far below my horizon, which I had seen in travelling many hundreds of miles along the line. All this is volcanic work on a very grand scale, sufficient as it would seem to prove that the world is hot below us, but the fracture and folding of old sedimentary beds in Oregon and elsewhere in North America is far greater work, for which volcanic outbursts do not account. Cones result from a force which throws up a fountain of rubbish through some opening. Flats and ridges of lava and basalt were floods of melted stone which flowed through some long break in the crust. A sidelong crush alone accounts for long rifts through which such vast floods and fountains escaped, till the force within conquered itself and sealed the opening. A sidelong crush from east and west alone accounts for the strike in the mountains of North America; for the general folding of rocks in that wide area; and for the lines of fracture through which basalt and volcanic cones rose in that part of Western America which I have seen. Such crushing may account for the bulging of a whole shattered continent, and for the sinking of the bed of an ocean with all its hills. Nothing less than the general shrinking of a cooling world still hot within, can account for such volcanic action, and for the crushing of the whole crust.

That which is true of Japan and North America is true in Java, close to the line. A long array of volcanoes is ranged on the strike of altered rocks, so far as I could see rocks for the tropical forest which covers everything. Some of these cones are finished, and the force which built them has broken out at the base in a last effort. Some are truncated and unfinished, with cones growing in their craters. Some are

cones which have not got beyond the stage of a great ring, surrounding the axis of a growing cone. Some are broken, and these probably are the oldest samples. All the forms that I saw in America, Japan, and Java, I saw in miniature at My-Vatten in Iceland. The growth of a volcano is according to fixed mechanical laws which models explain.

Alluvial plains extend from the Javanese mountains to the coast, and seem to be raised sea bottoms. The cones have their longest slope to the westward. They are deeply scarred by water-courses. Great stones are in deltas near the steep hills. Red mud is everywhere: in the rivers, on the plains on the sea margin, and in the sea. The last matter erupted in Java was red mud. The rivers have done little work on the plain. In the hills, marks of erosion are proportional to the floods of tropical rain which pour in these wet, hot regions. There as in Japan, and in North America, volcanic action accounts for mud, and ashes, sulphur, and hot water thrown upwards to build cones 12,000 feet high. But something greater is needed to account for the lines of fracture of which these cones are built, and for the bulging of the crust which has raised the Malayan Archipelago from a coral sea. The internal heat and secular cooling and contraction of the earth appear to me nearly as manifest as the sun's heat and his light. That which is true of Europe, America, and Asia is true of Africa. Volcanoes are active or recent near areas which have risen from the sea. Something common to the whole earth is needed to account for the raising of mountain formations which geologists study in all quarters of the globe, and that something appears to be the secular cooling of the earth which again makes a past glacial period improbable.

XXI.—THE AGE OF OREGON DRIFT.¹

A GLACIAL period is improbable in the history of a cooling world. American geologists attribute the rise of the Rocky Mountains to disturbance in cretaceous times. There has been no general Glacial period in the Rocky Mountains since they rose, because of deep cañons and other old marks of aqueous erosion, and because there are no conspicuous marks of any general glacial action between the Mississippi and the Californian lake district. 8

Some of the ranges in Oregon are newer than cretaceous times, because fossils of that age have been found high up on Shasta Bute. The volcanoes of the Aleutian Isles are newer than tertiary beds which occur on their flanks. The volcanoes of Japan are of recent growth; those of Java are growing. The Oregon cones are newer than gold veins, which traverse Jurassic rocks according to local geologists. No gold-bearing veins have been found in Californian traps or lavas. No washed gold has been found in any streams which flow from volcanic cones on the Pacific coast. But natural gold-washing went on before the volcanoes grew to their present size. East of California, in Nevada, miners have "struck" old river beds with rolled stones and washed gold in them beneath beds of igneous rock. So they told me. I found petrified trees in

¹ These notes were made while travelling rapidly through a new country, thickly covered with dense forest, and obscured by frequent mists. To work out the volcanic phenomena of Scotland alone has cost the whole power and time of geologists and geology. I therefore write with hesitation about Oregon.

a bed of sandstone under a bed of rolled stones cemented together, which bed passed under about 4,000 feet of basalt at the narrows of the Columbia River, in the Oregon "Cascade range." Where the river has worn the top of this sandstone bed, the old stumps stand in water, as if the trees had lately been felled. They grew before Mount Hood, which is near the place, and 11,000 feet high at least.

North of Columbia River it seemed to me that sheets of basalt cover part of the Northern Drift, which extends northwards over the whole of Washington Territory. At Victoria, that drift overlies striated rocks in Vancouver's Island. Along Puget Sound the northern drift is chiefly composed of beds of rolled stones, sand, and gravel, two or three hundred feet thick at least. Amongst these beds recent sea shells occur at considerable heights. In this marine drift beds of lignite occur. One is twelve feet thick, and the timber rafts buried in shingle are little altered. Lumberers think that they can recognize trees of growing species. At rare intervals a few large erratics standing in the growing forest, or left in the bed of a stream, or recently washed from a gravel bluff by the sea, give this marine drift a glacial character. Striae at Victoria demonstrate that heavy ice there passed southwards over the rocks before they were covered with Northern drift. The drift is newer than these ice marks. It is older than the Cascade range, for I could discover no stones of volcanic origin near the mouth of a large river, which enters Puget Sound, near Tacoma, and flows from Mount Rainier, a volcanic cone, on which I saw what I supposed to be a glacier. All the stones that I could find there, great and small, were smooth rolled fragments of granite, quartz, and hard rocks, like those

which I have seen in northern drift in Russia. This drift is older than the basalt which covers it near the Columbia River. Nothing like it is known further south on the Pacific coast.

It seems to be recorded that these old ice marks, and this marine northern drift about the latitude of Devonshire, on the Pacific coast, are older than the volcanic coast range, which is said to be of cretaceous age, and as old as the Rocky Mountains. But this drift, which is older than cretaceous times, and the only record of Polar glaciation that I could find on the Pacific coast in America, or in Japan, coincided with a climate like that which now exists about Puget Sound, and which has existed there during the whole period according to the evidence of fossils buried in the drift and under the basalt. Shells lived in the sea as they do now; trees now grow to the extreme height of 300 feet; trees then grew so abundantly that rafts twelve feet thick gathered and were buried under gravel and sand. Then as now a few large stones were dropped from ice amongst the sea shells. Later on, floods of basalt buried the forest, charred some of the rafts, and made them brown coal. On the new surface grew new forests, in which life flourished. Elephants' tusks have been found low down in the basalt series. That surface was buried in turn, and new floods flowed over new surfaces, till the Cascade range was piled up 4,000 feet deep, and till cones grew to their full size of 11,000 feet or more. The whole land bulged and rose, mountains and all; the drift on it rose above water, and then land waters, and sea waves, and tides, began to dig Puget Sound out of the drift. I could not see a solid rock in a day's steaming between Tacoma and Victoria, till near Vancouver's Island. In this whole record, which

seems to be continuous from cretaceous times, or from the rise of the Rocky Mountains at any rate, there is no place left for a general Glacial period which extinguishes life.

Under 4,000 feet of basalt I found fossil trees. Local geologists have found shells, elephants' bones, and a series of fossil records between the leaves of this great stone book in sections cut through it by eroding streams. There has been no Glacial period there. There are no marks of Polar glaciation anywhere near the present limit of northern drift on the Pacific coast.

The world is a cooling mass. I believe that the present is the coldest period of which there is any geological record, and that Polar glaciation now is, and always has been, marine in low latitudes.¹

XXII.—CONCLUSION.

I HAVE now ranged my budget of facts in order. I left home to go round Europe, July 24th, 1873, and turned westward at Astrakhan, September 17th. I got home after 151 days on the 22nd of December.

I left home again on the 6th of July, 1874, and passed the meridian of Astrakhan westwards on the 23rd of May. On the 7th of June I got to my old route at Marseilles; on the 9th I got home, after following the setting sun for 337 days. I saw a great deal in these 488 days. I saw nothing but

¹ A report by the State Geologist of Oregon was "ordered to be printed" in September, 1874. I hope to read it when it appears. From newspaper reports, I learn that it will show in detail evidence to prove that the basin of Oregon covered many surfaces in succession, on all of which life abounded.

indicate a general Glacial period along the routes. Half round the world I saw that it never was covered by an ice-cap. Having passed along a whole circle of longitude, and more than a quadrant of latitude in twenty months; having been to perpetual snow in summer, and to tropical heat in winter in mines, I have ceased to believe in a Glacial period, of which I can find no marks on high hills. It may be said that the volcanoes of Oregon, Japan, and Java, have grown since the glacial period. The crystalline gneiss hills of Ceylon are old and hard. There are no glacial marks in Ceylon. But ice there forms new at 6,500 feet above the sea at the foot of Pedro Tulagulla. During a glacial period the limit of freezing must have been lowered everywhere, and glaciers must have grown where it freezes now, and where ten inches of rain now fall in twenty-four hours. After careful search I could see nothing like a glacial mark of any kind, from a firth and rock basin to a scratched pebble, between Victoria in Vancouver's Island, and the highest point in Ceylon. I saw nothing glacial on the way to Marseilles, except snow in Crete and Corsica.

A period of Polar glaciation has begun, and is chiefly marine so far. If the earth goes on cooling, the snow plane may come down even on Adam's Peak, and extinguish his race. A solid ice-cap may yet cover the land, and fill the bed of the sea, and grow till it shuts up the world. But I have found no record of any such past event. The secular cooling of the earth is a manifest fact recorded everywhere, and makes that improbable which is recorded nowhere that I have been.

My conclusion as to Polar glaciation is, that the present is

the period of Polar glaciation and the "Glacial period," and the coldest period that the world has felt since it was a fused drop, cooling in space, subject to physical laws which govern the solar system, and the materials of which it is made.

XXIII.—A GEOLOGICAL GLOBE.

Jan. 28th, 1875.—I have vainly sought for a published geological globe, with or without relief, which I have often missed. I have therefore tried to depict that which I have tried to describe. I have painted a 12-inch globe, to show the position of glaciers and drifting sea ice, and of northern glacial drift, so far as I have learned that kind of superficial geology from books, maps, and observation. I have painted the side of the brazen meridian white, from the Pole to 60° N. the limit of glaciers which now enter the sea in Greenland and North America. To 37° N. I have dotted the quadrant within the limit of Atlantic drift. On the edge I have marked a white patch at 36° N., for small American and Asian glaciers which exist at 8,000 or 10,000 feet above the sea. I have put a larger patch between 27° and 28° N., for an Asian glacier of larger size, which ends about 13,000 feet above the tide. Taking all that together, and given like meteorological and other conditions, scattered marks of old glacial action probably register scattered local climates, like those which exist locally north of 27°.

By turning the globe, spots on it pass under these painted glacial marks. The band between 27° and 28° N. passes

over the hottest region in the world, which is in Arabia, and over large glaciers in the Himalayas.

If the world were fluid, a section at 40° or 50° would be as circular as the surface of the sea is in a calm. That fluid surface rises and falls with the tidal wave, with earthquake waves, and with the ocean swell. Where it is frozen the crust moves also. Between 40° and 50° the solid surface on which the sea rests is not circular. By turning the globe eastwards, I follow my westward track. From the bottom of the Caspian Sea the surface goes up over plains and over the Caucasus, and over small glaciers, ending at 7,374 feet, below a cone 16,000 feet high. The surface goes down to the bottom of the Black Sea, and the volcanic hollow of the Greek Archipelago. It goes up over Greece to snows, down into the Adriatic, up over the Appennines and Alps and Swiss glaciers; down into the Mediterranean hollow, up to summer snows in Corsica, down again to Mediterranean depths, up over snows in the Pyrenees, and over the sunny plains of France and Spain. Then it goes down to the depths of the Atlantic, where water is cold; to rise over America, sink under the Pacific, to cold water; and rise over Asia into cold air. The worn surface of a band ten degrees wide is like a rough sea on the back of a tidal wave. The crests of the waves rise into a glacial period. Neglecting short steep dips and rises, volcanic cones, isolated mountains, and mountain chains; and all faults and marks of wearing; the crest of one solid earth-wave is somewhere about the desert of Gobi in Asia; and the crest of another is nearly opposite to it somewhere about the middle of North America. The troughs of these two land-waves are opposite to each other, beneath

the Atlantic and the Pacific. The height of the highest points and deepest depths above and below fluid tides, so far as known to me is, roughly, five miles each way—say ten miles, or one-sixth of a degree; or about one-sixtieth part of an inch on a twelve-inch globe, where a degree is about a tenth of an inch long.

A coat of varnish would represent the whole difference on a physical globe made in relief to scale. The solid surface is not at rest. I have felt it move. It is constantly moving, and it has been moving from the earliest times yet determined by geologists according to facts, "*which cannot be unfacted*," as a baby philosopher lately said, to clinch her argument. The crests of the American and Asian land-waves have both been under the sea. Fossils are near Kashgar and Salt Lake to prove it. "Stubborn geological facts," as Mr. Evans, President of the Geological Society, called them, which cannot be "*unfacted*."

The troughs may have been crests. The shape of the sea-bottom is like that of dry land; the dry crests may be troughs again. When I consider my collection of mental geological sections sketched between 40° and 50° N. and near the line during the last three years, while looking at my painted globe, I find a general tendency to a meridian strike in the largest folds of sedimentary altered rocks. I find most folds and faults and igneous rocks in the lowest and oldest of the geological series. I think that I have seen a general tendency to folding caused by forces acting from E.W. amidst minor folds and wrinkles as numerous and as various in size and direction as waves and ripples are on tidal waves in the wide ocean.

I have given my opinion on one branch of superficial geology which I have studied. Subterranean geology must be matter of induction. My induction from facts known to me is this: I suppose that the globe still is fluid, under a crust which has been growing thicker below while the cooling surface above has been worn and mended to an amount equal to the sum of all sedimentary rocks; from those now forming back to Laurentian times, or possibly much further back in time.

I find experimentally that cold water may rest on a thin layer of clay—or of any non-conducting substance within a short distance of water boiling under the clay—on iron, or on any good conductor artificially heated.

I suppose that the forces which raise daily tides in the sea, whether it be tropical or Arctic; heated or crusted with ice; also raised denser fluids, and their crust of solidified igneous rocks. When that crust was thinner, I suppose that the outer world was warmer; I suppose that the surface was more easily moved and cooled and shrunk faster and was more easily folded, *e.g.* while coal was growing. I suppose that the same forces which now raise tides under sea ice raised them in the fluid which was uppermost, and moved the crust whatever it may have been made of. I suppose that the same forces still move a thicker crust, very slowly and gradually, by a continually recurring daily strain always repeated in the same western direction, as meridians pass eastwards under the sun and moon. They raise tidal waves which follow them westwards like hands on a clock, according to Newton and Laplace, and those who publish maps and books on tides. According to this supposition, the western

coasts of the old and new worlds may be rising in front of slowly-advancing land-waves whose crusts are continents and whose troughs hold the sea. Eastern sea coasts may be slowly sinking, behind these waves. I suspect that they are. I do not yet know enough of these facts to be able even to form an opinion. I know that great part of the western coast of Europe has risen, and that part of it is slowly rising. I know nothing about the coast of Africa, but the Sahara has risen from the sea. I know that some parts of the opposite eastern American coasts are sinking, and that the sea has encroached on the land. At other places the eastern coast of America is said to be rising. Part of the western American Pacific coasts have risen and have been seen to rise; possibly Asia was bounded on the east by the deep Pacific region, and has sunk enough to let the sea cover a wide fringe of shallows; which are inside of Kamtchatka, Japan, the Philippines, and Borneo. Certainly many parts of these regions have been up and down many times. Possibly the rise and fall of land may be found to obey a law which may be explained like the law of the tides, and may be as regular. I do not know; but "I want to know."

"There is a region in which geology passes into cosmogony." To that region the late and reigning chiefs of the Geological Society, to which I have the honour to belong, pointed. "There I left them," as the old men in the mountains are wont to say when they cease telling an endless story. There I find my learned friends when I return to school from my holiday, with this my holiday task. I have more than once ventured out of soundings on a voyage of discovery all alone, to return convinced that we have a great

deal to learn, so let us go ahead and pull together, acknowledge errors, confess ignorance, try to learn and add all we know to the common stock.¹

XXXIV.—AN EARTHQUAKE.*

To show what an earthquake has done, I add an account of the wreck of a Russian frigate on the coast of Japan in 1854. Some years ago the sea rose at Kobe in the south of Japan. On the opposite side of the Pacific, in South America, a like event happened. It was described in the English newspapers. Such waves may account for marks near the Pacific coasts, which are like raised sea margins. In any case, this disturbance of the earth's crust was a fact.

The earthquake which wrecked the *Diana* was a most signal catastrophe; but, as no Europeans were present save the *Diana's* crew, and as they were scattered immediately afterwards, no account ever reached Europe about it. Many other details Kovalevski gave me, for he became in India an especial chum of mine; but the inclosed is simply his translation of his log, and of course is not in very good English.

The Russians behaved heroically, and built themselves a

¹ December 1, 1875. In confirmation of some of my writings on *Frost and Fire* (1862 and 1875), I wish to refer to a great work by well-known authors—*The Moon considered as a Planet, a World, and a Satellite*, by James Nasmyth, C.E., and James Carpenter, F.R.A.S. (John Murray, Albemarle Street, London, 1874.) In reading that work, the secular cooling of the earth, and the consequent crushing and crumpling of the surface which is proved in the latest American Geological Report for 1874 to be a fact, seems to be explained reasonably. The whole solar system must be considered henceforth by geologists who treat their science broadly. So treated, a glacial period seems to me improbable and unproved.

* Description sent by the Rev. Mr. Fothergill, written by his brother.

schooner ashore, in which the admiral, captain, chief officer, and the main of the men, escaped either to Petropaulski or up the river Amoor, we never knew which, but Kovalevski told me that they reached St. Petersburg by druskies overland all safe.

Just before the vessel was abandoned, the money chest was brought on the quarter deck, and each officer took whatever sum he chose, which was put down by the captain against his future pay.

Out of five officers we had on board, four spoke English perfectly. They were perfect gentlemen, used to play at whist, and go to balls at Hong Kong and Madras, shot in Ceylon, &c.; for the two were on board of us for more than six months, and we all parted with much regret on the peace after the Crimea. They went by schooner to Amoor, and across country to St. Petersburg.

Translated Extract, word for word, from the Log of Lieutenant Kovalevski, of late Russian frigate "Diana," wrecked in Simoda Bay, Japan, on the 23rd December, 1854.

About 200 men and eight officers were captured by H.M.S. *Styx*, endeavouring to escape to Petropaulski, in Kamtschatka. Ninety-three seamen and five officers were transferred to H.M.S. *Nankin*, 50. Subsequently only two were left—Lieutenants Kovalevski and Prince Michealoff, the former a grandson of General Kovalevski, who commanded a brigade in the Crimea, from whom the appended account was given to Percival A. Fothergill, N.I. of H.M.S. *Nankin*.

On the 23rd December, 1854, 9 A.M., the frigate wished to shift berth, and sent a boat to lay out a small anchor on the

bow of ship ; at 9.15 boat returned ; at 9.30 another anchor was sent from stern ; 9.45, whilst laying out the second anchor, felt the frigate shake very much, and for about one minute. The admiral shifts the ship again ; but, on sounding, we find eight fathoms. We all think it was an earthquake. The water was calm, and the sky clear, so we begin to think it was nothing, and began again to shift the ship.

10 A.M.—A large wave was seen coming rolling in the bay, and the water rise very rapidly on the land, immersing the village of Simoda, so that we thought the land was sinking. A large Japanese junk was driven on shore with violence ; but the frigate held to her anchors. One cutter and captain's gig on shore repairing we see going out to sea, and we send a boat to fetch them ; but in five minutes we observe the water very muddy, going rapidly out of bay. We lashed our guns fast, closed the ports, and secure and batten down everything. During this the large boat that was sent to lay out the anchor was recalled. Having let go the cable, we had only time to hoist up one boat ; but all the men got on board. The other boats were washed on shore. At this time a large wave rolled into the bay, and, on its receding, all the houses in the village were washed out with it, quite filling the bay with houses and junks, and the frigate began to drag.

10.15 A.M.—Let go second bower anchor ; but this anchor had not time to bring up before a third wave came rolling into the bay ; and this wave, on receding, left not a single house in the village ; the only building which was left standing was a temple in process of building. A stream of

smoke is seen on side of hill, but we could not observe where it came from, and a strong smell of sulphur in the air. The water then advances and returns so quickly that a regular whirlpool is made in bay, and all the Japanese junks and our frigate begin to rotate so quick that we all become giddy. The frigate only describes three-quarters of circle. The landsman report the frigate (report the) dragging, but we did not let go the third anchor, knowing there would be time before we went on shore.

10.30 A.M.—A large junk come with great force on our starboard bow, and carried away flying jib-boom, jib-boom, martingale, whiskers, and swinging booms, leaving only bowsprit, with the bows much injured. Two men from junk managed to scramble on board, but the other five would not come though asked, and immediately she went down. Whilst the frigate was turning, the small island was only three cable's lengths from us, and the nearest island only half a cable, and during half an hour the frigate made from sixty to seventy turns, during which we were nearer than half a cable to the island.

10.45 A.M.—Let go third anchor. We were so near to island that bowsprit was only five feet from island; so that a few times we took off our caps (Russians do when going into the presence of God), and were ready for death, but God was merciful. We can do nothing with frigate, for the water turn her at pleasure; and at one time we were so near, the ship fell on her beam ends, burying half her main-yard across her gunwale in water, and so much we could not stand on deck, very likely having touched some small rock, but we could not tell, the motion was so rapid. Frigate was in this position about five minutes, and on water rising a little ship

righted and slid off, but before she was properly righted she described three-quarters of a circle two or three times. On falling from the rock, we lost our rudder, half our stern-post and false keel, piece of keel eighty-one feet long, and two planks. In these five minutes the water rose from six feet to twenty-three. One of the guns amidships broke adrift, and jumped across two guns on the opposite side, and injured five men—one killed, one lose his leg, another three ribs broken, another neck cut, another lose finger. When frigate righted we find thirty inches water in hold; all pumps were worked.

12 noon.—Ebb and flow begin to be less violent. We put out shores on each side—on starboard side, spanker boom, stunsail booms, &c.; on port side, main and mizen topmasts, &c. Twenty-five inches water in hold.

12.15 P.M.—Finished making shores.

12.30 P.M.—Water came with same force, making whirlpool in bay and turning frigate; this continued from

1.30 to 2.30 P.M.—No large wave came into bay, but the tide rose and fell very quickly, from, in five minutes, twenty-three feet to two feet, and one time we saw all our anchors come up from the bottom. During this time the frigate was on her beam ends four times; carried away all shores.

3 P.M.—Everything was still, and frigate was in twenty-two feet of water, and making twenty-two inches every hour. Round the ship and covering the bay were the wrecks of junks and houses; from the top of one of these houses we take an old woman, quite insensible; during all this time the day was the finest we had had, and wind very light from N.E.; from first shock to finish of the earthquake the barometer was 29.87 Ther. (Fahrenheit) 57.78.

3.30 P.M.—We begin to clear our anchors, and with the starboard anchor came beam, which we took on board; during this work the surgeon went on shore to assist the Japanese; these last say that about 300 had been drowned. All hands slept that night in their clothes.

24th December, 1854.—We begin early to clear our anchor: on heaving up port anchor, ship began to drag, and we let go anchor in the waist, and we find that both lower anchors come up together, and with them several Japanese anchors, clothes, one large net, &c., &c., &c. In the evening the anchors were cleared.

25th December, 1854.—Send the boat to find rudder and keel; the keel was found about half a mile inland, with admiral's barge, bottom up, but not the rudder. After dinner all officers go ashore, and we could not tell where houses and streets had been. On our return, when stepping into boat, in one moment water left her; we were going to launch her, but before the men could get out of the boat, the water returned and the boat got on board the frigate. The bells were rung on shore to warn the people, and on board we laid out a keedge to haul the frigate into deep water.

9 P.M.—The frigate begin to turn, but not so strongly as at first day, but there was only one fathom of water. Out of 1,000 houses only thirty remained, and the former site of the town is now strewn with wrecks of junks. Two miles inland a large junk was seen, and several large landslips. We remained at Simoda till the 12th of January. Then, not finding a convenient place to heave her down, we tried to tow her round to Lartowie, about thirty miles from Simoda. With the aid of a large number of temporary rudders when we

started the wind was fresh from N.E., but ship would not steer, driving fast on shore ; we therefore let go the anchor : this was about 9 A.M. After dinner we tried again to sail out, but were obliged again to anchor.

14th January, 1855.—Wind not so fresh. All her guns were brought aft, and on weighing the ship went before the wind, but on attempting to enter the Bay of Lortomie, we had to tack, and would have anchored, but could find no bottom, although we were within the bay. So we wished to cruise all night.

6.30 P.M.—Wind came S.W., but not knowing the place, it was not thought advisable to enter before daylight ; the wind was very strong, and, when near the shore, the ship would not wear or stay. The ropes which held the temporary rudder gave way ; we then hove to and put the rudder through the admiral's cabin. The ship during all this was driving up the bay, and when the rudder was finished it had no command over the ship. We then furled all the sails to allow her to drive up, but though very near the land there was no bottom. The leadsmen at last sings out nine fathoms, and the anchors were immediately let go ; we were then about twenty fathoms from shore ; all the yards and topmasts were sent down : this was finished about 3 P.M.

15th January, 1855.—The pumps could not keep the water from increasing. After dinner a consultation was held, and they forsake the frigate.

6 P.M.—A boat was sent ashore with a rope ; there was a great surf on the beach, but the rope was made fast to the shore.

16th January, 1855.—Hoisted up fore and main yards to

hoist the boats out. The sick were first on shore in the barge. The other men were hauled through the surf. Several casks were thrown overboard, but did not drive ashore.

6 P.M.—All men were ashore except admiral, captain, and first lieutenant. Captain left the last.

17th *January*, 1855.—There was six feet of water on lower deck: it was attempted to take something out of her, but very little could be saved.

18th *January*, 1855.—Japanese sent 300 boats to tow the frigate up the bay. Admiral, captain, and some other officers with twenty men went on board to let go the cable, gave the tow rope to the boats and leave; the whole of the white streak was under water. The boats towed the frigate about three-and-a-half miles; the wind increased from the S.W. and the boats left the frigate and made the best of their way on shore: in about twenty minutes frigate gave a lurch to port, righted for a moment, and then sank.

XXXV. OPINIONS.

PAGES 213 to 322. Upon facts learned I have formed opinions which may be all wrong. "*No sabe.*"

1st. I have not found marks of a "period" colder than the present, and wait for evidence to prove that "a general Glacial period" ever existed.

2nd. The circulation of gases and fluids, of air and water upon this globe, evaporation condensation and consequence erosion are caused and regulated by unequal temperature, I

radiation, and by the earth's rotation. I think I know so much.

3rd. That circulation accounts for cold local climates, like those of Iceland, and Greenland, and Labrador, and the antarctic regions; and for ancient local climates like these, which are recorded by glacial marks in like latitudes, in Russia, in Finland, in Scandinavia, in the British Isles, in North America, and elsewhere on the world's surface. That is my opinion.

4th. Movements at the earth's solid surface, observed and recorded by fossils, &c., account for the recorded displacement of the sea, with its hot and cold currents, and their climates—cold and warm, wet and dry.

5th. These movements, which still continue, and the ascertained crushing and folding of concentric shells of sedimentary beds of rock, result from the cooling and shrinking of the earth's mass, which still is hot beneath the surface; which still is fused beneath active volcanoes; and which *may* still be a fluid mass shrinking within a solid crust. So I suppose.

6th. I suspect that these movements may be regular on the large scale, and may result from the same mechanical laws which move tides under ice. I do not know enough to form an opinion.

7th. I have learned to face my own ignorance, and to hold opinions on all such matters provisionally. The longer I live and learn the more I feel how much there is that may be learned: "how little it is we do know," and how vast is that knowledge which is beyond human reach.

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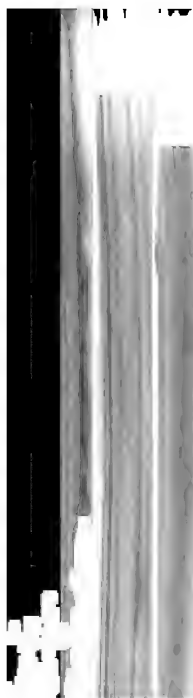
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